No. 6032

INDIA, PAKISTAN and INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

The Indus Waters Treaty 1960 (with annexes). Signed at Karachi, on 19 September 1960

Protocol to the above-mentioned Treaty. Signed on 27 November, 2 and 23 December 1960

Official text: English.

Registered by India on 16 January 1962.

INDE, PAKISTAN et BANQUE INTERNATIONALE POUR LA RECONSTRUCTION ET LE DÉVELOPPEMENT

Traité de 1960 sur les eaux de l'Indus (avec annexes). Signé à Karachi, le 19 septembre 1960

Protocole relatif au Traité susmentionné. Signé les 27 novembre, 2 et 23 décembre 1960

Texte officiel: anglais.

Enregistrés par l'Inde le 16 janvier 1962.

No. 6032. THE INDUS WATERS TREATY 1960[1] BETWEEN THE GOVERNMENT OF INDIA, THE GOVERNMENT OF PAKISTAN AND THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. SIGNED AT KARACHI, ON 19 SEPTEMBER 1960

PREAMBLE

The Government of India and the Government of Pakistan, being equally desirous of attaining the most complete and satisfactory utilisation of the waters of the Indus system of rivers and recognising the need, therefore, of fixing and delimiting, in a spirit of goodwill and friendship, the rights and obligations of each in relation to the other concerning the use of these waters and of making provision for the settlement, in a cooperative spirit, of all such questions as may hereafter arise in regard to the interpretation or application of the provisions agreed upon herein, have resolved to conclude a Treaty in furtherance of these objectives, and for this purpose have named as their plenipotentiaries :

The Government of India :

Shri Jawaharlal Nehru, Prime Minister of India, and

The Government of Pakistan :

Field Marshal Mohammad Ayub Khan, H.P., H.J., President of Pakistan ;

who, having communicated to each other their respective Full Powers and having found them in good and due form, have agreed upon the following Articles and Annexures :

Article I

DEFINITIONS

As used in this Treaty :

(1) The terms "Article" and "Annexure" mean respectively an Article of, and an Annexure to, this Treaty. Except as otherwise indicated, references to Paragraphs are to the paragraphs in the Article or in the Annexure in which the reference is made.

[1] Came into force on 12 January 1961, upon the exchange of the instruments of ratification at New Delhi, with retroactive effect from 1 April 1960, in accordance with article XII (2).
The text printed herein incorporates the corrections effected by the Protocol signed on 27 November, 2 and 23 December 1960 (See p. 290 of this volume).

(2) The term "Tributary" of a river means any surface channel, whether in continuous or intermittent flow and by whatever name called, whose waters in the natural course would fall into that river, e.g. a tributary, a torrent, a natural drainage, an artificial drainage, a *nadi*, a *nallah*, a *nai*, a *khad*, a *cho*. The term also includes any subtributary or branch or subsidiary channel, by whatever name called, whose waters, in the natural course, would directly or otherwise flow into that surface channel.

(3) The term "The Indus," "The Jhelum," "The Chenab," "The Ravi," "The Beas" or "The Sutlej" means the named river (including Connecting Lakes, if any) and all its Tributaries : Provided however that

(i) none of the rivers named above shall be deemed to be a Tributary ;

(ii) The Chenab shall be deemed to include the river Panjnad ; and

(iii) the river Chandra and the river Bhaga shall be deemed to be Tributaries of The Chenab.

(4) The term "Main" added after Indus, Jhelum, Chenab, Sutlej, Beas or Ravi means the main stem of the named river excluding its Tributaries, but including all channels and creeks of the main stem of that river and such Connecting Lakes as form part of the main stem itself. The Jhelum Main shall be deemed to extend up to Verinag, and the Chenab Main up to the confluence of the river Chandra and the river Bhaga.

(5) The term "Eastern Rivers" means The Sutlej, The Beas and The Ravi taken together.

(6) The term "Western Rivers" means The Indus, The Jhelum and The Chenab taken together.

(7) The term "the Rivers" means all the rivers, The Sutlej, The Beas, The Ravi, The Indus, The Jhelum and The Chenab.

(8) The term "Connecting Lake" means any lake which receives water from, or yields water to, any of the Rivers ; but any lake which occasionally and irregularly receives only the spill of any of the Rivers and returns only the whole or part of that spill is not a Connecting Lake.

(9) The term "Agricultural Use" means the use of water for irrigation, except for irrigation of household gardens and public recreational gardens.

(10) The term "Domestic Use" means the use of water for :

(*a*) drinking, washing, bathing, recreation, sanitation (including the conveyance and dilution of sewage and of industrial and other wastes), stock and poultry, and other like purposes ;

(*b*) household and municipal purposes (including use for household gardens and public recreational gardens) ; and

(*c*) industrial purposes (including mining, milling and other like purposes) ;

but the term does not include Agricultural Use or use for the generation of hydro-electric power.

(11) The term "Non-Consumptive Use" means any control or use of water for navigation, floating of timber or other property, flood protection or flood control, fishing or fish culture, wild life or other like beneficial purposes, provided that, exclusive of seepage and evaporation of water incidental to the control or use, the water (undiminished in volume within the practical range of measurement) remains in, or is returned to, the same river or its Tributaries ; but the term does not include Agricultural Use or use for the generation of hydro-electric power.

(12) The term "Transition Period" means the period beginning and ending as provided in Article II (6).

(13) The term "Bank" means the International Bank for Reconstruction and Development.

(14) The term "Commissioner" means either of the Commissioners appointed under the provisions of Article VIII (1) and the term "Commission" means the Permanent Indus Commission constituted in accordance with Article VIII (3).

(15) The term "interference with the waters" means :

(*a*) Any act of withdrawal therefrom ; or

(*b*) Any man-made obstruction to their flow which causes a change in the volume (within the practical range of measurement) of the daily flow of the waters : Provided however that an obstruction which involves only an insignificant and incidental change in the volume of the daily flow, for example, fluctuations due to afflux caused by bridge piers or a temporary by-pass, etc., shall not be deemed to be an interference with the waters.

(16) The term "Effective Date" means the date on which this Treaty takes effect in accordance with the provisions of Article XII, that is, the first of April 1960.

Article II

Provisions regarding Eastern Rivers

(1) All the waters of the Eastern Rivers shall be available for the unrestricted use of India, except as otherwise expressly provided in this Article.

(2) Except for Domestic Use and Non-Consumptive Use, Pakistan shall be under an obligation to let flow, and shall not permit any interference with, the waters of the

Sutlej Main and the Ravi Main in the reaches where these rivers flow in Pakistan and have not yet finally crossed into Pakistan. The points of final crossing are the following : (*a*) near the new Hasta Bund upstream of Suleimanke in the case of the Sutlej Main, and (*b*) about one and a half miles upstream of the syphon for the B-R-B-D Link in the case of the Ravi Main.

(3) Except for Domestic Use, Non-Consumptive Use and Agricultural (as specified in Annexure B),[1] Pakistan shall be under an obligation to let flow, and shall not permit any interference with, the waters (while flowing in Pakistan) of any Tributary which in its natural course joins the Sutlej Main or the Ravi Main before these rivers have finally crossed into Pakistan.

(4) All the waters, while flowing in Pakistan, of any Tributary which, in its natural course, joins the Sutlej Main or the Ravi Main after these rivers have finally crossed into Pakistan shall be available for the unrestricted use of Pakistan : Provided however that this provision shall not be construed as giving Pakistan any claim or right to any releases by India in any such Tributary. If Pakistan should deliver any of the waters of any such Tributary, which on the Effective Date joins the Ravi Main after this river has finally crossed into Pakistan, into a reach of the Ravi Main upstream of this crossing, India shall not make use of these waters ; each Party agrees to establish such discharge observation stations and make such observations as may be necessary for the determination of the component of water available for the use of Pakistan on account of the aforesaid deliveries by Pakistan, and Pakistan agrees to meet the cost of establishing the aforesaid discharge observation stations and making the aforesaid observations.

(5) There shall be a Transition Period during which, to the extent specified in Annexure H,[2] India shall

(i) limit its withdrawals for Agricultural Use,

(ii) limit abstractions for storages, and

(iii) make deliveries to Pakistan

from the Eastern Rivers.

(6) The Transition Period shall begin on 1st April 1960 and it shall end on 31st March 1970, or, if extended under the provisions of Part 8 of Annexure H, on the date up to which it has been extended. In any event, whether or not the replacement referred to in Article IV (1) has been accomplished, the Transition Period shall end not later than 31st March 1973.

[1] See p. 160 of this volume.
[2] See p. 222 of this volume.

(7) If the Transition Period is extended beyond 31st March 1970, the provisions of Article V (5) shall apply.

(8) If the Transition Period is extended beyond 31st March 1970, the provisions of Paragraph (5) shall apply during the period of extension beyond 31st March 1970.

(9) During the Transition Period, Pakistan shall receive for unrestricted use the waters of the Eastern Rivers which are to be released by India in accordance with the provisions of Annexure H. After the end of the Transition Period, Pakistan shal have no claim or right to releases by India of any of the waters of the Eastern Rivers. In case there are any releases, Pakistan shall enjoy the unrestricted use of the waters so released after they have finally crossed into Pakistan : Provided that in the event that Pakistan makes any use of these waters, Pakistan shall not acquire any right whatsoever, by prescription or otherwise, to a continuance of such releases or such use.

Article III

PROVISIONS REGARDING WESTERN RIVERS

(1) Pakistan shall receive for unrestricted use all those waters of the Western Rivers which India is under obligation to let flow under the provisions of Paragraph (2).

(2) India shall be under an obligation to let flow all the waters of the Western Rivers, and shall not permit any interference with these waters, except for the following uses, restricted (except as provided in item (*c*) (ii) of Paragraph 5 of Annexure C)[1] in the case of each of the rivers, The Indus, The Jhelum and The Chenab, to the drainage basin thereof :

(*a*) Domestic Use ;

(*b*) Non-Consumptive Use ;

(*c*) Agricultural Use, as set out in Annexure C ; and

(*d*) Generation of hydro-electric power, as set out in Annexure D.[2]

(3) Pakistan shall have the unrestricted use of all waters originating from sources other than the Eastern Rivers which are delivered by Pakistan into The Ravi or The Sutlej, and India shall not make use of these waters. Each Party agrees to establish such discharge observation stations and make such observations as may be considered necessary by the Commission for the determination of the component of water available for the use of Pakistan on account of the aforesaid deliveries by Pakistan.

[1] See p. 162 of this volume.
[2] See p. 170 of this volume.

(4) Except as provided in Annexures D and E,[1] India shall not store any water of, or construct any storage works on, the Western Rivers.

Article IV

PROVISIONS REGARDING EASTERN RIVERS AND WESTERN RIVERS

(1) Pakistan shall use its best endeavours to construct and bring into operation, with due regard to expedition and economy, that part of a system of works which will accomplish the replacement, from the Western Rivers and other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947, were dependent on water supplies from the Eastern Rivers.

(2) Each Party agrees that any Non-Consumptive Use made by it shall be so made as not to materially change, on account of such use, the flow in any channel to the prejudice of the uses on that channel by the other Party under the provisions of this Treaty. In executing any scheme of flood protection or flood control each Party will avoid, as far as practicable, any material damage to the other Party, and any such scheme carried out by India on the Western Rivers shall not involve any use of water or any storage in addition to that provided under Article III.

(3) Nothing in this Treaty shall be construed as having the effect of preventing either Party from undertaking schemes of drainage, river training, conservation of soil against erosion and dredging, or from removal of stones, gravel or sand from the beds of the Rivers : Provided that

(*a*) in executing any of the schemes mentioned above, each Party will avoid, as far as practicable, any material damage to the other Party ;

(*b*) any such scheme carried out by India on the Western Rivers shall not involve any use of water or any storage in addition to that provided under Article III ;

(*c*) except as provided in Paragraph (5) and Article VII (1) (*b*), India shall not take any action to increase the catchment area, beyond the area on the Effective Date, of any natural or artificial drainage or drain which crosses into Pakistan, and shall not undertake such construction or remodelling of any drainage or drain which so crosses or falls into a drainage or drain which so crosses as might cause material damage in Pakistan or entail the construction of a new drain or enlargement of an existing drainage or drain in Pakistan ; and

(*d*) should Pakistan desire to increase the catchment area, beyond the area on the Effective Date, of any natural or artificial drainage or drain, which receives drainage waters from India, or, except in an emergency, to pour any waters into

[1] See pp. 170 and 186 of this volume.

it in excess of the quantities received by it as on the Effective Date, Pakistan shall, before undertaking any work for these purposes, increase the capacity of that drainage or drain to the extent necessary so as not to impair its efficacy for dealing with drainage waters received from India as on the Effective Date.

(4) Pakistan shall maintain in good order its portions of the drainages mentioned below with capacities not less than the capacities as on the Effective Date :

(i) Hudiara Drain
(ii) Kasur Nala
(iii) Salimshah Drain
(iv) Fazilka Drain.

(5) If India finds it necessary that any of the drainages mentioned in Paragraph (4) should be deepened or widened in Pakistan, Pakistan agrees to undertake to do so as a work of public interest, provided India agrees to pay the cost of the deepening or widening.

(6) Each Party will use its best endeavours to maintain the natural channels of the Rivers, as on the Effective Date, in such condition as will avoid, as far as practicable, any obstruction to the flow in these channels likely to cause material damage to the other Party.

(7) Neither Party will take any action which would have the effect of diverting the Ravi Main between Madhopur and Lahore, or the Sutlej Main between Harike and Suleimanke, from its natural channel between high banks.

(8) The use of the natural channels of the Rivers for the discharge of flood or other excess waters shall be free and not subject to limitation by either Party, and neither Party shall have any claim against the other in respect of any damage caused by such use. Each Party agrees to communicate to the other Party, as far in advance as practicable, any information it may have in regard to such extraordinary discharges of water from reservoirs and flood flows as may affect the other Party.

(9) Each Party declares its intention to operate its storage dams, barrages and irrigation canals in such manner, consistent with the normal operations of its hydraulic systems, as to avoid, as far as feasible, material damage to the other Party.

(10) Each Party declares its intention to prevent, as far as practicable, undue pollution of the waters of the Rivers which might affect adversely uses similar in nature to those to which the waters were put on the Effective Date, and agrees to take all reasonable measures to ensure that, before any sewage or industrial waste is allowed to flow into the Rivers, it will be treated, where necessary, in such manner

as not materially to affect those uses : Provided that the criterion of reasonableness shall be the customary practice in similar situations on the Rivers.

(11) The Parties agree to adopt, as far as feasible, appropriate measures for the recovery, and restoration to owners, of timber and other property floated or floating down the Rivers, subject to appropriate charges being paid by the owners.

(12) The use of water for industrial purposes under Articles II (2), II (3) and III (2) shall not exceed :

(*a*) in the case of an industrial process known on the Effective Date, such quantum of use as was customary in that process on the Effective Date ;

(*b*) in the case of an industrial process not known on the Effective Date :

(i) such quantum of use as was customary on the Effective Date in similar or in any way comparable industrial processes ; or

(ii) if there was no industrial process on the Effective Date similar or in any way comparable to the new process, such quantum of use as would not have a substantially adverse effect on the other Party.

(13) Such part of any water withdrawn for Domestic Use under the provisions of Articles II (3) and III (2) as is subsequently applied to Agricultural Use shall be accounted for as part of the Agricultural Use specified in Annexure B and Annexure C respectively ; each Party will use its best endeavours to return to the same river (directly or through one of its Tributaries) all water withdrawn therefrom for industrial purposes and not consumed either in the industrial processes for which it was withdrawn or in some other Domestic Use.

(14) In the event that either Party should develop a use of the waters of the Rivers which is not in accordance with the provisions of this Treaty, that Party shall not acquire by reason of such use any right, by prescription or otherwise, to a continuance of such use.

(15) Except as otherwise required by the express provisions of this Treaty, nothing in this Treaty shall be construed as affecting existing territorial rights over the waters of any of the Rivers or the beds or banks thereof, or as affecting existing property rights under municipal law over such waters or beds or banks.

Article V

Financial Provisions

(1) In consideration of the fact that the purpose of part of the system of works referred to in Article IV (1) is the replacement, from the Western Rivers and other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947, were dependent on water supplies from the Eastern Rivers, India agrees to make a fixed contribution of Pounds Sterling 62,060,000 towards the costs of these works.

The amount in Pounds Sterling of this contribution shall remain unchanged irrespective of any alteration in the par value of any currency.

(2) The sum of Pounds Sterling 62,060,000 specified in Paragraph (1) shall be paid in ten equal annual instalments on the 1st of November of each year. The first of such annual instalments shall be paid on 1st November 1960, or if the Treaty has not entered into force by that date, then within one month after the Treaty enters into force.

(3) Each of the instalments specified in Paragraph (2) shall be paid to the Bank for the credit of the Indus Basin Development Fund to be established and administered by the Bank, and payment shall be made in Pounds Sterling, or in such other currency or currencies as may from time to time be agreed between India and the Bank.

(4) The payments provided for under the provisions of Paragraph (3) shall be made without deduction or set-off on account of any financial claims of India on Pakistan arising otherwise than under the provisions of this Treaty : Provided that this provision shall in no way absolve Pakistan from the necessity of paying in other ways debts to India which may be outstanding against Pakistan.

(5) If, at the request of Pakistan, the Transition Period is extended in accordance with the provisions of Article II (6) and of Part 8 of Annexure H, the Bank shall thereupon pay to India out of the Indus Basin Development Fund the appropriate amount specified in the Table below :

Table

Period of Aggregate Extension of Transition Period	*Payment to India £ Stg.*
One year	3,125,000
Two years	6,406,250
Three years	9,850,000

(6) The provisions of Article IV (1) and Article V (1) shall not be construed as conferring upon India any right to participate in the decisions as to the system of works which Pakistan constructs pursuant to Article IV (1) or as constituting an assumption of any responsibility by India or as an agreement by India in regard to such works.

(7) Except for such payments as are specifically provided for in this Treaty, neither Party shall be entitled to claim any payment for observance of the provisions of this Treaty or to make any charge for water received from it by the other Party.

Article VI

EXCHANGE OF DATA

(1) The following data with respect to the flow in, and utilisation of the waters of, the Rivers shall be exchanged regularly between the Parties :

(*a*) Daily (or as observed or estimated less frequently) gauge and discharge data relating to flow of the Rivers at all observation sites.

(*b*) Daily extractions for or releases from reservoirs.

(*c*) Daily withdrawals at the heads of all canals operated by government or by a government agency (hereinafter in this Article called canals), including link canals.

(*d*) Daily escapages from all canals, including link canals.

(*e*) Daily deliveries from link canals.

These data shall be transmitted monthly by each Party to the other as soon as the data for a calendar month have been collected and tabulated, but not later than three months after the end of the months to which they relate : Provided that such of the data specified above as are considered by either Party to be necessary for operational purposes shall be supplied daily or at less frequent intervals, as may be requested. Should one Party request the supply of any of these data by telegram, telephone, or wireless, it shall reimburse the other Party for the cost of transmission.

(2) If, in addition to the data specified in Paragraph (1) of this Article, either Party requests the supply of any data relating to the hydrology of the Rivers, or to canal or reservoir operation connected with the Rivers, or to any provision of this Treaty, such data shall be supplied by the other Party to the extent that these are available.

Article VII

FUTURE CO-OPERATION

(1) The two Parties recognize that they have a common interest in the optimum development of the Rivers, and, to that end, they declare their intention to co-operate, by mutual agreement, to the fullest possible extent. In particular :

(*a*) Each Party, to the extent it considers practicable and on agreement by the other Party to pay the costs to be incurred, will, at the request of the other Party, set up or install such hydrologic observation stations within the drainage basins of the Rivers, and set up or install such meteorological observation stations relating thereto and carry out such observations thereat, as may be requested, and will supply the data so obtained.

(*b*) Each Party, to the extent it considers practicable and on agreement by the other Party to pay the costs to be incurred, will, at the request of the other Party, carry out such new drainage works as may be required in connection with new drainage works of the other Party.

(*c*) At the request of either Party, the two Parties may, by mutual agreement, co-operate in undertaking engineering works on the Rivers.

The formal arrangements, in each case, shall be as agreed upon between the Parties.

(2) If either Party plans to construct any engineering work which would cause interference with the waters of any of the Rivers and which, in its opinion, would affect the other Party materially, it shall notify the other Party of its plans and shall supply such data relating to the work as may be available and as would enable the other Party to inform itself of the nature, magnitude and effect of the work. If a work would cause interference with the waters of any of the Rivers but would not, in the opinion of the Party planning it, affect the other Party materially, nevertheless the Party planning the work shall, on request, supply the other Party with such data regarding the nature, magnitude and effect, if any, of the work as may be available.

Article VIII

PERMANENT INDUS COMMISSION

(1) India and Pakistan shall each create a permanent post of Commissioner for Indus Waters, and shall appoint to this post, as often as a vacancy occurs, a person who should ordinarily be a high-ranking engineer competent in the field of hydrology and water-use. Unless either Government should decide to take up any particular question directly with the other Government, each Commissioner will be the representative of his Government for all matters arising out of this Treaty, and will serve as the regular channel of communication on all matters relating to the implementation of the Treaty, and, in particular, with respect to

(*a*) the furnishing or exchange of information or data provided for in the Treaty ; and

(*b*) the giving of any notice or response to any notice provided for in the Treaty.

(2) The status of each Commissioner and his duties and responsibilities towards his Government will be determined by that Government.

(3) The two Commissioners shall together form the Permanent Indus Commission.

(4) The purpose and functions of the Commission shall be to establish and maintain co-operative arrangements for the implementation of this Treaty, to promote

co-operation between the Parties in the development of the waters of the Rivers and, in particular,

(*a*) to study and report to the two Governments on any problem relating to the development of the waters of the Rivers which may be jointly referred to the Commission by the two Governments : in the event that a reference is made by one Government alone, the Commissioner of the other Government shall obtain the authorization of his Government before he proceeds to act on the reference ;

(*b*) to make every effort to settle promptly, in accordance with the provisions of Article IX (1), any question arising thereunder ;

(*c*) to undertake, once in every five years, a general tour of inspection of the Rivers for ascertaining the facts connected with various developments and works on the Rivers ;

(*d*) to undertake promptly, at the request of either Commissioner, a tour of inspection of such works or sites on the Rivers as may be considered necessary by him for ascertaining the facts connected with those works or sites ; and

(*e*) to take, during the Transition Period, such steps as may be necessary for the implementation of the provisions of Annexure H.

(5) The Commission shall meet regularly at least once a year, alternately in India and Pakistan. This regular annual meeting shall be held in November or in such other month as may be agreed upon between the Commissioners. The Commission shall also meet when requested by either Commissioner.

(6) To enable the Commissioners to perform their functions in the Commission, each Government agrees to accord to the Commissioner of the other Government the same privileges and immunities as are accorded to representatives of member States to the principal and subsidiary organs of the United Nations under Sections 11, 12 and 13 of Article IV of the Convention on the Privileges and Immunities of the United Nations[1] (dated 13th February, 1946) during the periods specified in those Sections. It is understood and agreed that these privileges and immunities are accorded to the Commissioners not for the personal benefit of the individuals themselves but in order to safeguard the independent exercise of their functions in connection with the Commission ; consequently, the Government appointing the Commissioner not only has the right but is under a duty to waive the immunity of its Commissioner in any case where, in the opinion of the appointing Government, the immunity would impede the course of justice and can be waived without prejudice to the purpose for which the immunity is accorded.

(7) For the purposes of the inspections specified in Paragraph (4) (*c*) and (*d*), each Commissioner may be accompanied by two advisers or assistants to whom appropriate facilities will be accorded.

[1] See footnote 1, p. 38 of this volume.

(8) The Commission shall submit to the Government of India and to the Government of Pakistan, before the first of June of every year, a report on its work for the year ended on the preceding 31st of March, and may submit to the two Governments other reports at such times as it may think desirable.

(9) Each Government shall bear the expenses of its Commissioner and his ordinary staff. The cost of any special staff required in connection with the work mentioned in Article VII (1) shall be borne as provided therein.

(10) The Commission shall determine its own procedures.

Article IX

SETTLEMENT OF DIFFERENCES AND DISPUTES

(1) Any question which arises between the Parties concerning the interpretation or application of this Treaty or the existence of any fact which, if established, might constitute a breach of this Treaty shall first be examined by the Commission, which will endeavour to resolve the question by agreement.

(2) If the Commission does not reach agreement on any of the questions mentioned in Paragraph (1), then a difference will be deemed to have arisen, which shall be dealt with as follows:

(*a*) Any difference which, in the opinion of either Commissioner, falls within the provisions of Part 1 of Annexure F [1] shall, at the request of either Commissioner, be dealt with by a Neutral Expert in accordance with the provisions of Part 2 of Annexure F;

(*b*) If the difference does not come within the provisions of Paragraph (2) (*a*), or if a Neutral Expert, in accordance with the provisions of Paragraph 7 of Annexure F, has informed the Commission that, in his opinion, the difference, or a part thereof, should be treated as a dispute, then a dispute will be deemed to have arisen which shall be settled in accordance with the provisions of Paragraphs (3), (4) and (5):

Provided that, at the discretion of the Commission, any difference may either be dealt with by a Neutral Expert in accordance with the provisions of Part 2 of Annexure F or be deemed to be a dispute to be settled in accordance with the provisions of Paragraphs (3), (4) and (5), or may be settled in any other way agreed upon by the Commission.

(3) As soon as a dispute to be settled in accordance with this and the succeeding paragraphs of this Article has arisen, the Commission shall, at the request of either Commissioner, report the fact to the two Governments, as early as practicable, stating in its report the points on which the Commission is in agreement and the issues in dispute, the views of each Commissioner on these issues and his reasons therefor.

[1] See p. 202 of this volume.

(4) Either Government may, following receipt of the report referred to in Paragraph (3), or if it comes to the conclusion that this report is being unduly delayed in the Commission, invite the other Government to resolve the dispute by agreement. In doing so it shall state the names of its negotiators and their readiness to meet with the negotiators to be appointed by the other Government at a time and place to be indicated by the other Government. To assist in these negotiations, the two Governments may agree to enlist the services of one or more mediators acceptable to them.

(5) A court of Arbitration shall be established to resolve the dispute in the manner provided by Annexure G [1]

(*a*) upon agreement between the Parties to do so ; or

(*b*) at the request of either Party, if, after negotiations have begun pursuant to Paragraph (4), in its opinion the dispute is not likely to be resolved by negotiation or mediation ; or

(*c*) at the request of either Party, if, after the expiry of one month following receipt by the other Government of the invitation referred to in Paragraph (4), that Party comes to the conclusion that the other Government is unduly delaying the negotiations.

(6) The provisions of Paragraphs (3), (4) and (5) shall not apply to any difference while it is being dealt with by a Neutral Expert.

Article X

EMERGENCY PROVISION

If, at any time prior to 31st March 1965, Pakistan should represent to the Bank that, because of the outbreak of large-scale international hostilities arising out of causes beyond the control of Pakistan, it is unable to obtain from abroad the materials and equipment necessary for the completion, by 31st March 1973, of that part of the system of works referred to in Article IV (1) which related to the replacement referred to therein, (hereinafter referred to as the "replacement element") and if, after consideration of this representation in consultation with India, the Bank is of the opinion that

(*a*) these hostilities are on a scale of which the consequence is that Pakistan is unable to obtain in time such materials and equipment as must be procured from abroad for the completion, by 31st March 1973, of the replacement element, and

(*b*) since the Effective Date, Pakistan has taken all reasonable steps to obtain the said materials and equipment and, with such resources of materials and equipment as have been available to Pakistan both from within Pakistan and from abroad, has carried forward the construction of the replacement element with due diligence and all reasonable expedition,

[1] See p. 210 of this volume.

the Bank shall immediately notify each of the Parties accordingly. The Parties undertake, without prejudice to the provisions of Article XII (3) and (4), that on being so notified, they will forthwith consult together and enlist the good offices of the Bank in their consultation, with a view to reaching mutual agreement as to whether or not, in the light of all the circumstances then prevailing, any modifications of the provisions of this Treaty are appropriate and advisable and, if so, the nature and the extent of the modifications.

Article XI

General Provisions

(1) It is expressly understood that

(*a*) this Treaty governs the rights and obligations of each Party in relation to the other with respect only to the use of the waters of the Rivers and matters incidental thereto ; and

(*b*) nothing contained in this Treaty, and nothing arising out of the execution thereof, shall be construed as constituting a recognition or waiver (whether tacit, by implication or otherwise) of any rights or claims whatsoever of either of the Parties other than those rights or claims which are expressly recognized or waived in this Treaty.

Each of the Parties agrees that it will not invoke this Treaty, anything contained therein, or anything arising out of the execution thereof, in support of any of its own rights or claims whatsoever or in disputing any of the rights or claims whatsoever of the other Party, other than those rights or claims which are expressly recognized or waived in this Treaty.

(2) Nothing in this Treaty shall be construed by the Parties as in any way establishing any general principle of law or any precedent.

(3) The rights and obligations of each Party under this Treaty shall remain unaffected by any provisions contained in, or by anything arising out of the execution of, any agreement establishing the Indus Basin Development Fund.

Article XII

Final Provisions

(1) This Treaty consists of the Preamble, the Articles hereof and Annexures A to H hereto, and may be cited as "The Indus Waters Treaty 1960".

(2) This Treaty shall be ratified and the ratifications thereof shall be exchanged in New Delhi. It shall enter into force upon the exchange of ratifications, and will then take effect retrospectively from the first of April 1960.

(3) The provisions of this Treaty may from time to time be modified by a duly ratified treaty concluded for that purpose between the two Governments.

(4) The provisions of this Treaty, or the provisions of this Treaty as modified under the provisions of Paragraph (3), shall continue in force until terminated by a duly ratified treaty concluded for that purpose between the two Governments.

IN WITNESS WHEREOF the respective Plenipotentiaries have signed this Treaty and have hereunto affixed their seals.

DONE in triplicate in English at Karachi on this Nineteenth day of September 1960.

For the Government of India :

(*Signed*) Jawaharlal NEHRU

For the Government of Pakistan :

(*Signed*) Mohammad Ayub KHAN
Field Marshal, H.P., H.J.

For the International Bank for Reconstruction and Development,
for the purposes specified in Articles V and X and Annexures F, G and H :

(*Signed*) W. A. B. ILIFF

ANNEXURE A—EXCHANGE OF NOTES BETWEEN GOVERNMENT OF INDIA AND GOVERNMENT OF PAKISTAN

I. NOTE DATED 19th SEPTEMBER 1960, FROM THE HIGH COMMISSIONER FOR INDIA IN PAKISTAN, KARACHI, TO THE MINISTER FOR FOREIGN AFFAIRS AND COMMONWEALTH RELATIONS, GOVERNMENT OF PAKISTAN

19th September, 1960

Excellency :

I have been instructed by my Government to communicate to you the following :

"The Government of India agrees that, on the ratification of the Indus Waters Treaty 1960,[1] the Inter-Dominion Agreement on the Canal Water Dispute signed at New Delhi on 4th May 1948[2] (of which a copy is annexed hereto) and the rights and obligations of either party thereto claimed under, or arising out of, that Agreement shall be without effect as from 1st April 1960.

[1] See p. 126 of this volume.
[2] United Nations, *Treaty Series*, Vol. 54, p. 45 ; Vol. 85, p. 356, and Vol. 128, p. 300.

"The position of the Government of India stated above and Your Excellency's Note of to-day's date stating the position of the Government of Pakistan on this question will form part of Annexure A to the Indus Waters Treaty 1960."

Accept, Excellency, the renewed assurance of my highest consideration.

ANNEX

A dispute has arisen between the East and West Punjab Governments regarding the supply by East Punjab of water to the Central Bari Doab and the Depalpur canals in West Punjab. The contention of the East Punjab Government is that under the Punjab Partition (Apportionment of Assets and Liabilities) Order, 1947, and the Arbitral Award the proprietary rights in the waters of the rivers in East Punjab vest wholly in the East Punjab Government and that the West Punjab Government cannot claim any share of these waters as a right. The West Punjab Government disputes this contention, its view being that the point has conclusively been decided in its favour by implication by the Arbitral Award and that in accordance with international law and equity, West Punjab has a right to the waters of the East Punjab rivers.

2. The East Punjab Government has revived the flow of water into these canals on certain conditions of which two are disputed by West Punjab. One, which arises out of the contention in paragraph 1, is the right to the levy of seigniorage charges for water and the other is the question of the capital cost of the *Madhavpur Head Works and carrier channels to be taken into account.

3. The East and West Punjab Governments are anxious that this question should be settled in a spirit of goodwill and friendship. Without prejudice to its legal rights in the matter the East Punjab Government has assured the West Punjab Government that it has no intention suddenly to withhold water from West Punjab without giving it time to tap alternative sources. The West Punjab Government on its part recognise the natural anxiety of the East Punjab Government to discharge the obligation to develop areas where water is scarce and which were under-developed in relation to parts of West Punjab.

4. Apart, therefore, from the question of law involved, the Governments are anxious to approach the problem in a practical spirit on the basis of the East Punjab Government progressively diminishing its supply to these canals in order to give reasonable time to enable the West Punjab Government to tap alternative sources.

5. The West Punjab Government has agreed to deposit immediately in the Reserve Bank such *ad hoc* sum as may be specified by the Prime Minister of India. Out of this sum, that Government agrees to the immediate transfer to East Punjab Government of sums over which there is no dispute.

* sic "Madhopur"

6. After an examination by each party of the legal issues, of the method of estimating the cost of water to be supplied by the East Punjab Government and of the technical survey of water resources and the means of using them for supply to these canals, the two Governments agree that further meetings between their representatives should take place.

7. The Dominion Governments of India and Pakistan accept the above terms and express the hope that a friendly solution will be reached.

Jawaharlal NEHRU
N. V. GADGIL
Swaran SINGH

Ghulam MOHD
Shaukat Hyat KHAN
Mumtaz DAULTANA

New Delhi, May 4, 1948

II. NOTE DATED 19th SEPTEMBER 1960, FROM THE MINISTER FOR FOREIGN AFFAIRS AND COMMONWEALTH RELATIONS, GOVERNMENT OF PAKISTAN, TO THE HIGH COMMISSIONER FOR INDIA IN PAKISTAN, KARACHI

19th September, 1960

Excellency :

I have been instructed by my Government to communicate to you the following :

"The Government of Pakistan agrees that, on the ratification of the Indus Waters Treaty 1960, the document on the Canal Water Dispute signed at New Delhi on 4th May 1948 (of which a copy is annexed hereto) and the rights and obligations of either party thereto claimed under, or arising out of, that document shall be without effect as from 1st April 1960.

"The position of the Government of Pakistan stated above and Your Excellency's Note of to-day's date stating the position of the Government of India on this question will form part of Annexure A to the Indus Waters Treaty 1960."

Accept, Excellency, the renewed assurance of my highest consideration.

ANNEX

[*For the text of this annex, see p. 158 of this volume*]

ANNEXURE B—AGRICULTURAL USE BY PAKISTAN FROM CERTAIN TRIBUTARIES OF THE RAVI

(Article II (3))

1. The provisions of this Annexure shall apply with respect to the Agricultural Use by Pakistan from certain Tributaries of The Ravi under the provisions of Article, II (3) and, subject to the provisions of this Annexure, such use shall be unrestricted.

2. Pakistan may withdraw from the Basantar Tributary of the Ravi such waters as may be available and necessary for the irrigation of not more than 100 acres annually.

3. In addition to the area specified in Paragraph 2, Pakistan may also withdraw such waters from each of the following Tributaries of The Ravi as may be available and as may be necessary for the irrigation of that part of the following areas cultivated on *sailab* as on the Effective Date which cannot be so cultivated after that date : Provided that the total area whether irrigated or cultivated on *sailab* shall not exceed the limits specified below, except during a year of exceptionally heavy floods when *sailab* may extend to areas which were not cultivated on *sailab* as on the Effective Date and when such areas may be cultivated in addition to the limits specified :

Name of Tributary	*Maximum Annual Cultivation (acres)*
Basantar	14,000
Bein	26,600
Tarnah	1,800
Ujh	3,000

4. The provisions of Paragraphs 2 and 3 shall not be construed as giving Pakistan any claim or right to any releases by India in the Tributaries mentioned in these paragraphs.

5. Not later than 31st March 1961, Pakistan shall furnish to India a statement by Districts and Tehsils showing (i) the area irrigated and (ii) the area cultivated on *sailab*, as on the Effective Date, from the waters of each of the Tributaries specified in Paragraphs 2 and 3.

6. As soon as the statistics for each crop year (commencing with the beginning of *kharif* and ending with the end of the following *rabi*) have been compiled at the District Headquarters, but not later than the 30th November following the end of that crop year, Pakistan shall furnish to India a statement arranged by Tributaries and showing for each of the Districts and Tehsils irrigated or cultivated on *sailab* from the Tributaries mentioned in Paragraphs 2 and 3 :

(i) the area irrigated, and

(ii) the area cultivated on *sailab*.

ANNEXURE C—AGRICULTURAL USE BY INDIA FROM THE WESTERN RIVERS

(Article III(2)(c))

1. The provisions of this Annexure shall apply with respect to the Agricultural Use by India from the Western Rivers under the provisions of Article III (2) (*c*) and, subject to the provisions of this Annexure, such use shall be unrestricted.

2. As used in this Annexure, the term "Irrigated Cropped Area" means the total area under irrigated crops in a year, the same area being counted twice if it bears different crops in *kharif* and *rabi*. The term shall be deemed to exclude small blocks of *ghair mumkim* lands in an irrigated field, lands on which cultivation is dependent on rain or snow and to which no irrigation water is applied, areas naturally inundated by river flow and cultivated on *sailab* thereafter, any area under floating gardens or *demb* lands in and along any lakes, and any area under waterplants growing within the water-spread of any lake or in standing water in a natural depression.

3. India may withdraw from the Chenab Main such waters as India may need for Agricultural Use on the following canals limited to the maximum withdrawals noted against each :

Name of Canal	*Maximum Withdrawals for Agricultural Use*
(*a*) Ranbir Canal	1,000 cusecs from 15th April to 14th October, and 350 cusecs from 15th October to 14th April.
(*b*) Pratap Canal	400 cusecs from 15th April to 14th October, and 100 cusecs from 15th October to 14th April.

Provided that :

(i) The maximum withdrawals shown above shall be exclusive of any withdrawals which may be made through these canals for purposes of silt extraction on condition that the waters withdrawn for silt extraction are returned to The Chenab.

(ii) India may make additional withdrawals through the Ranbir Canal up to 250 cusecs for hydro-electric generation on condition that the waters so withdrawn are returned to The Chenab.

(iii) If India should construct a barrage across the Chenab Main below the head regulators of these two canals, the withdrawals to be then made, limited to the amounts specified in (*a*) and (*b*) above, during each 10-day period or subperiod thereof, shall be as determined by the Commission in accordance with sound irrigation practice and, in the absence of agreement between the Commissioners, by a Neutral Expert in accordance with the provisions of Annexure F.

4. Apart from the irrigation from the Ranbir and Pratap Canals under the provisions of Paragraph 3, India may continue to irrigate from the Western Rivers those areas which were so irrigated as on the Effective Date.

5. In addition to such withdrawals as may be made in accordance with the provisions of Paragraphs 3 and 4, India may, subject to the provisions of Paragraphs 6, 7, 8 and 9, make further withdrawals from the Western Rivers to the extent India may consider necessary to meet the irrigation needs of the areas specified below :

Particulars	*Maximum Irrigated Cropped Area (over and above the cropped area irrigated under the provisions of Paragraphs 3 and 4) (acres)*
(*a*) From The Indus, in its drainage basin	70,000
(*b*) From The Jhelum, in its drainage basin	400,000
(*c*) From The Chenab,	
(i) in its drainage basin	225,000 of which not more than 100,000 acres will be in the Jammu District.
(ii) outside its drainage basin in the area west of the Deg Nadi (also called Devak River), the aggregate capacity of irrigating channels leading out of the drainage basin of the Chenab to this area not to exceed 120 cusecs . .	6,000

Provided that

(i) in addition to the maximum Irrigated Cropped Area specified above, India may irrigate road-side trees from any source whatever ;

(ii) the maximum Irrigated Cropped Area shown against items (*a*), (*b*) and (*c*) (i) above shall be deemed to include cropped areas, if any, irrigated from an open well, a tube-well, a spring, a lake (other than a Connecting lake) or a tank, in excess of the areas so irrigated as on the Effective Date ; and

(iii) the aggregate of the areas specified against items (*a*), (*b*) and (*c*) (i) above may be re-distributed among the three drainage basins in such manner as may be agreed upon between the Commissioners.

6. (*a*) Within the limits of the maximum Irrigated Cropped Areas specified against items (*b*) and (*c*) (i) in Paragraph 5, there shall be no restriction on the development of such of these areas as may be irrigated from an open well, a tube-well, a spring, a lake (other than a Connecting Lake) or a tank.

(*b*) Within the limits of the maximum Irrigated Cropped Areas specified against items (*b*) and (*c*) in Paragraph 5, there shall be no restriction on the development of such of these areas as may be irrigated from General Storage (as defined in Annexure E) ;[1] the areas irrigated from General Storage may, however, receive irrigation from river flow also, but, unless the Commissioners otherwise agree, only in the following periods :—

(i) from The Jhelum : 21st June to 20th August

(ii) from The Chenab : 21st June to 31st August :

Provided that withdrawals for such irrigation, whether from General Storage or from river flow, are controlled by Government.

7. Within the limits of the maximum Irrigated Cropped Areas specified against items (*b*) and (*c*) in Paragraph 5, the development of these areas by withdrawals from river

[1] See p. 186 of this volume.

flow (as distinct from withdrawals from General Storage *cum* river flow in accordance with Paragraph 6 (*b*)) shall be regulated as follows :

(*a*) Until India can release water from Conservation Storage (as defined in Annexure E) in accordance with sub-paragraphs (*b*) and (*c*) below, the new area developed shall not exceed the following :

(i) from The Jhelum : 150,000 acres

(ii) from The Chenab : 25,000 acres during the Transition Period and 50,000 acres after the end of the Transition Period.

(*b*) In addition to the areas specified in (*a*) above, there may be developed from The Jhelum or The Chenab an aggregate area of 150,000 acres if there is released annually from Conservation Storage, in accordance with Paragraph 8, a volume of 0.2 MAF into The Jhelum and a volume of 0.1 MAF into The Chenab ; provided that India shall have the option to store on and release into The Chenab the whole or a part of the volume of 0.2 MAF specified above for release into The Jhelum.

(*c*) Any additional areas over and above those specified in (*a*) and (*b*) above may be developed if there is released annually from Conservation Storage a volume of 0.2 MAF into The Jhelum or The Chenab, in accordance with Paragraph 8, in addition to the releases specified in (*b*) above.

8. The releases from Conservation Storage, as specified in Paragraphs 7 (*b*) and 7 (*c*), shall be made in accordance with a schedule to be determined by the Commission which shall keep in view, first, the effect, if any, on Agricultural Use by Pakistan consequent on the reduction in supplies available to Pakistan as a result of the withdrawals made by India under the provisions of Paragraph 7 and, then, the requirements, if any, of hydro-electric power to be developed by India from these releases. In the absence of agreement between the Commissioners, the matter may be referred under the provisions of Article IX (2) (*a*) for decision to a Neutral Expert.

9. On those Tributaries of The Jhelum on which there is any Agricultural Use or hydro-electric use by Pakistan, any new Agricultural Use by India shall be so made as not to affect adversely the then existing Agricultural Use or hydro-electric use by Pakistan on those Tributaries.

10. Not later than 31st March 1961, India shall furnish to Pakistan a statement showing, for each of the Districts and Tehsils irrigated from the Western Rivers, the Irrigated Cropped Area as on the Effective Date (excluding only the area irrigated under the provisions of Paragraph 3), arranged in accordance with items (*a*), (*b*) and (*c*)(i) of Paragraph 5 : Provided that in the case of areas in the Punjab, the date may be extended to 30th September 1961.

11. (*a*) As soon as the statistics for each crop year (commencing with the beginning of *kharif* and ending with the end of the following *rabi*) have been compiled at the District Headquarters, but not later than the 30th November following the end of that crop year, India shall furnish to Pakistan a statement showing for each of the Districts and *Tehsils* irrigated from the Western Rivers, the total Irrigated Cropped Areas (excluding the area

irrigated under the provisions of Paragraph 3) arranged in accordance with items (*a*), (*b*), (*c*) (i) and (*c*) (ii) of Paragraph 5 : Provided that, in the case of areas in the Punjab, the 30th November date specified above may be extended to the following 30th June in the event of failure of communications.

(*b*) If the limits specified in Paragraph 7 (*a*) or 7 (*b*) are exceeded for any crop year, the statement shall also show the figures for Irrigated Cropped Areas falling under Paragraph 6 (*a*) and 6 (*b*) respectively, unless appropriate releases from Conservation Storage under the provisions of Paragraph 8 have already begun to be made.

ANNEXURE D—GENERATION OF HYDRO-ELECTRIC POWER BY INDIA ON THE WESTERN RIVERS

(Article III (2)(d))

1. The provisions of this Annexure shall apply with respect to the use by India of the waters of the Western Rivers for the generation of hydro-electric power under the provisions of Article III (2)(*d*) and, subject to the provisions of this Annexure, such use shall be unrestricted : Provided that the design, construction and operation of new hydro-electric plants which are incorporated in a Storage Work (as defined in Annexure E) shall be governed by the relevant provisions of Annexure E. [1]

PART 1—DEFINITIONS

2. As used in this Annexure :

(*a*) "Dead Storage" means that portion of the storage which is not used for operational purposes and "Dead Storage Level" means the level corresponding to Dead Storage.

(*b*) "Live Storage" means all storage above Dead Storage.

(*c*) "Pondage" means Live Storage of only sufficient magnitude to meet fluctuations in the discharge of the turbines arising from variations in the daily and the weekly loads of the plant.

(*d*) "Full Pondage Level" means the level corresponding to the maximum Pondage provided in the design in accordance with Paragraph 8 (*c*).

(*e*) "Surcharge Storage" means uncontrollable storage occupying space above the Full Pondage Level.

(*f*) "Operating Pool" means the storage capacity between Dead Storage level and Full Pondage Level.

[1] See p. 186 of this volume.

(*g*) "Run-of-River Plant" means a hydro-electric plant that develops power without Live Storage as an integral part of the plant, except for Pondage and Surcharge Storage.

(*h*) "Regulating Basin" means the basin whose only purpose is to even out fluctuations in the discharge from the turbines arising from variations in the daily and the weekly loads of the plant.

(*i*) "Firm Power" means the hydro-electric power corresponding to the minimum mean discharge at the site of a plant, the minimum mean discharge being calculated as follows :

The average discharge for each 10-day period (1st to 10th, 11th to 20th and 21st to the end of the month) will be worked out for each year for which discharge data, whether observed or estimated, are proposed to be studied for purposes of design. The mean of the yearly values for each 10-day period will then be worked out. The lowest of the mean values thus obtained will be taken as the minimum mean discharge. The studies will be based on data for as long a period as available but may be limited to the latest 5 years in the case of Small Plants (as defined in Paragraph 18) and to the latest 25 years in the case of other Plants (as defined in Paragraph 8).

(*j*) "Secondary Power" means the power, other than Firm Power, available only during certain periods of the year.

PART 2—HYDRO-ELECTRIC PLANTS IN OPERATION, OR UNDER CONSTRUCTION, AS ON THE EFFECTIVE DATE

3. There shall be no restriction on the operation of the following hydro-electric plants which were in operation as on the Effective Date :

Name of Plant	*Capacity (exclusive of standby units) (kilowatts)*
(i) Pahalgam	186
(ii) Bandipura	30
(iii) Dachhigam	40
(iv) Ranbir Canal	1,200
(v) Udhampur	640
(vi) Poonch	160

4. There shall be no restriction on the completion by India, in accordance with the design adopted prior to the Effective Date, or on the operation by India, of the following hydro-electric plants which were actually under construction on the Effective Date, whether or not the plant was on that date in partial operation :

Name of Plant	*Designed capacity (exclusive of standby units) (kilowatts)*
(i) Mahora	12,000
(ii) Ganderbal	15,000
(iii) Kupwara	150
(iv) Bhadarwah	600
(v) Kishtwar	350
(vi) Rajouri	650
(vii) Chinani	14,000
(viii) Nichalani Banihal	600

5. As soon as India finds it possible to do so, but not later than 31st March 1961, India shall communicate to Pakistan the Information specified in Appendix I [1] to this Annexure for each of the plants specified in Paragraphs 3 and 4. If any such information is not available or is not pertinent to the design of the plant or to the conditions at the site, it will be so stated.

6. (*a*) If any alteration proposed in the design of any of the plants specified in Paragraphs 3 and 4 would result in a material change in the information furnished to Pakistan under the provisions of Paragraph 5, India shall, at least 4 months in advance of making the alteration, communicate particulars of the change to Pakistan in writing and the provisions of Paragraph 7 shall then apply.

(*b*) In the event of an emergency arising which requires repairs to be undertaken to protect the integrity of any of the plants specified in Paragraphs 3 and 4, India may undertake immediately the necessary repairs or alterations and, if these repairs or alterations result in a change in the information furnished to Pakistan under the provisions of Paragraph 5, India shall as soon as possible communicate particulars of the change to Pakistan in writing. The provisions of Paragraph 7 shall then apply.

7. Within three months of the receipt of the particulars specified in Paragraph 6, Pakistan shall communicate to India in writing any objection it may have with regard to the proposed change on the ground that the change involves a material departure from the criteria set out in Paragraph 8 or 18 of this Annexure or Paragraph 11 of Annexure E as the case may be. If no objection is received by India from Pakistan within the specified period of three months, then Pakistan shall be deemed to have no objection. If a question arises as to whether or not the change involves a material departure from such of the criteria mentioned above as may be applicable, then either Party may proceed to have the question resolved in accordance with the provisions of Article IX(1) and (2).

Part 3—New run-of-river plants

8. Except as provided in Paragraph 18, the design of any new Run-of-River Plant (hereinafter in this Part referred to as a Plant) shall conform to the following criteria :

(*a*) The works themselves shall not be capable of raising artificially the water level in the Operating Pool above the Full Pondage Level specified in the design.

(*b*) The design of the works shall take due account of the requirements of Surcharge Storage and of Secondary Power.

(*c*) The maximum Pondage in the Operating Pool shall not exceed twice the Pondage required for Firm Power.

(*d*) There shall be no outlets below the Dead Storage Level, unless necessary for sediment control or any other technical purpose ; any such outlet shall be of the minimum size, and located at the highest level, consistent with sound and economical design and with satisfactory operation of the works.

[1] See p. 182 of this volume.

(*e*) If the conditions at the site of a Plant make a gated spillway necessary, the bottom level of the gates in normal closed position shall be located at the highest level consistent with sound and economical design and satisfactory construction and operation of the works.

(*f*) The intakes for the turbines shall be located at the highest level consistent with satisfactory and economical construction and operation of the Plant as a Run-of-River Plant and with customary and accepted practice of design for the designated range of the Plant's operation.

(*g*) If any Plant is constructed on the Chenab Main at a site below Kotru (Longitude 74° - 59′ East and Latitude 33° - 09′ North), a Regulating Basin shall be incorporated.

9. To enable Pakistan to satisfy itself that the design of a Plant conforms to the criteria mentioned in Paragraph 8, India shall, at least six months in advance of the beginning of construction of river works connected with the Plant, communicate to Pakistan, in writing, the information specified in Appendix II [1] to this Annexure. If any such information is not available or is not pertinent to the design of the Plant or to the conditions at the site, it will be so stated.

10. Within three months of the receipt by Pakistan of the information specified in Paragraph 9, Pakistan shall communicate to India, in writing, any objection that it may have with regard to the proposed design on the ground that it does not conform to the criteria mentioned in Paragraph 8. If no objection is received by India from Pakistan within the specified period of three months, then Pakistan shall be deemed to have no objection.

11. If a question arises as to whether or not the design of a Plant conforms to the criteria set out in Paragraph 8, then either Party may proceed to have the question resolved in accordance with the provisions of Article IX(1) and (2).

12. (*a*) If any alteration proposed in the design of a Plant before it comes into operation would result in a material change in the information furnished to Pakistan under the provisions of Paragraph 9, India shall immediately communicate particulars of the change to Pakistan in writing and the provisions of Paragraphs 10 and 11 shall then apply, but the period of three months specified in Paragraph 10 shall be reduced to two months.

(*b*) If any alteration proposed in the design of a Plant after it comes into operation would result in a material change in the information furnished to Pakistan under the provisions of Paragraph 9, India shall, at least four months in advance of making the alteration, communicate particulars of the change to Pakistan in writing and the provisions of Paragraphs 10 and 11 shall then apply, but the period of three months specified in Paragraph 10 shall be reduced to two months.

13. In the event of an emergency arising which requires repairs to be undertaken to protect the integrity of a Plant, India may undertake immediately the necessary repairs or alterations ; if these repairs or alterations result in a change in the information furnished

[1] See p. 182 of this volume.

to Pakistan under the provisions of Paragraph 9, India shall, as soon as possible, communicate particulars of the change to Pakistan in writing to enable Pakistan to satisfy itself that after such change the design of the Plant conforms to the criteria specified in Paragraph 8. The provisions of Paragraphs 10 and 11 shall then apply.

14. The filling of Dead Storage shall be carried out in accordance with the provisions of Paragraph 18 or 19 of Annexure E.

15. Subject to the provisions of Paragraph 17, the works connected with a Plant shall be so operated that (*a*) the volume of water received in the river upstream of the Plant, during any period of seven consecutive days, shall be delivered into the river below the Plant during the same seven-day period, and (*b*) in any one period of 24 hours within that seven-day period, the volume delivered into the river below the Plant shall be not less than 30%, and not more than 130%, of the volume received in the river above the Plant during the same 24-hour period : Provided however that :

(i) where a Plant is located at a site on the Chenab Main below Ramban, the volume of water received in the river upstream of the Plant in any one period of 24 hours shall be delivered into the river below the Plant within the same period of 24 hours ;

(ii) where a Plant is located at a site on the Chenab Main above Ramban, the volume of water delivered into the river below the Plant in any one period of 24 hours shall not be less than 50% and not more than 130%, of the volume received above the Plant during the same 24-hour period ; and

iii) where a Plant is located on a Tributary of The Jhelum on which Pakistan has any Agricultural use or hydro-electric use, the water released below the Plant may be delivered, if necessary, into another Tributary but only to the extent that the then existing Agricultural Use or hydro-electric use by Pakistan on the former Tributary would not be adversely affected.

16. For the purpose of Paragraph 15, the period of 24 hours shall commence at 8 a.m. daily and the period of 7 consecutive days shall commence at 8 a.m. on every Saturday. The time shall be Indian Standard Time.

17. The provisions of Paragraph 15 shall not apply during the period when the Dead Storage at a Plant is being filled in accordance with the provisions of Paragraph 14. In applying the provisions of Paragraph 15 :

(*a*) a tolerance of 10% in volume shall be permissible ; and

(*b*) Surcharge Storage shall be ignored.

18. The provisions of Paragraphs 8, 9, 10, 11, 12 and 13 shall not apply to a new Run-of-River Plant which is located on a Tributary and which conforms to the following criteria (hereinafter referred to as a Small Plant) :

(*a*) the aggregate designed maximum discharge through the turbines does not exceed 300 cusecs ;

(*b*) no storage is involved in connection with the Small Plant, except the Pondage and the storage incidental to the diversion structure ; and

(*c*) the crest of the diversion structure across the Tributary, or the top level of the gates, if any, shall not be higher than 20 feet above the mean bed of the Tributary at the site of the structure.

19. The information specified in Appendix III [1] to this Annexure shall be communicated to Pakistan by India at least two months in advance of the beginning of construction of the river works connected with a Small Plant. If any such information is not available or is not pertinent to the design of the Small Plant or to the conditions at the site, it will be so stated.

20. Within two months of the receipt by Pakistan of the information specified in Appendix III, Pakistan shall communicate to India, in writing, any objection that it may have with regard to the proposed design on the ground that it does not conform to the criteria mentioned in Paragraph 18. If no objection is received by India from Pakistan within the specified period of two months, then Pakistan shall be deemed to have no objection.

21. If a question arises as to whether or not the design of a Small Plant conforms to the criteria set out in Paragraph 18, then either Party may proceed to have the question resolved in accordance with the provisions of Article IX (1) and (2).

22. If any alteration in the design of a Small Plant, whether during the construction period or subsequently, results in a change in the information furnished to Pakistan under the provisions of Paragraph 19, then India shall immediately communicate the change in writing to Pakistan.

23. If, with any alteration proposed in the design of a Small Plant, the design would cease to comply with the criteria set out in Paragraph 18, then the provisions of Paragraphs 18 to 22 inclusive shall no longer apply and, in lieu thereof, the provisions of Paragraphs 8 to 13 inclusive shall apply.

Part 4—New plants on irrigation channels

24. Notwithstanding the foregoing provisions of this Annexure, there shall be no restriction on the construction and operation by India of new hydro-electric plants on any irrigation channel taking off the Western Rivers, provided that

(*a*) the works incorporate no storage other than Pondage and the Dead Storage incidental to the diversion structure, and

(*b*) no additional supplies are run in the irrigation channel for the purpose of generating hydro-electric power.

Part 5—General

25. If the change referred to in Paragraphs 6 (*a*) and 12 is not material, India shall communicate particulars of the change to Pakistan, in writing, as soon as the alteration has been made or the repairs have been undertaken. The provisions of Paragraph 7 or Paragraph 23, as the case may be, shall then apply.

[1] See p. 184 of this volume.

APPENDIX I TO ANNEXURE D

(Paragraph 5)

1. *Location of Plant*

General map showing the location of the site ; if on a Tributary, its situation with respect to the main river.

2. *Hydraulic Data*

(*a*) Stage-area and stage-capacity curves of the reservoir, forebay and Regulating Basin.

(*b*) Full Pondage Level, Dead Storage Level and Operating Pool.

(*c*) Dead Storage capacity.

3. *Particulars of Design*

(*a*) Type of spillway, length and crest level ; size, number and top level of spillway gates.

(*b*) Outlet works : function, type, size, number, maximum designed capacity and sill levels.

(*c*) Aggregate designed maximum discharge through the turbines.

(*d*) Maximum aggregate capacity of power units (exclusive of standby units) for Firm Power and Secondary Power.

(*e*) Regulating Basin and its outlet works : dimensions and maximum discharge capacity.

4. *General*

Probable date of completion of river works, and dates on which various stages of the plant would come into operation.

APPENDIX II TO ANNEXURE D

(Paragraph 9)

1. *Location of Plant*

General map showing the location of the site ; if on a Tributary, its situation with respect to the main river.

2. *Hydrologic Data*

(*a*) General map (Scale : ¼ inch or more = 1 mile) showing the discharge observation site or sites or rainfall gauge stations on whose data the design is based. In case of a Plant on a Tributary, this map should also show the catchment area of the Tributary above the site.

(*b*) Observed or estimated daily river discharge data on which the design is based (observed data will be given for as long a period as available ; estimated data will be given for as long a period as possible ; in both cases data may be limited to the latest 25 years).

(*c*) Flood data, observed or estimated (with details of estimation).

(*d*) Gauge-discharge curve or curves for site or sites mentioned in (*a*) above.

3. *Hydraulic Data*

(*a*) Stage-area and stage-capacity curves of the reservoir, forebay and Regulating Basin, with contoured survey maps on which based.

(*b*) Full Pondage Level, Dead Storage Level and Operating Pool together with the calculations for the Operating Pool.

(*c*) Dead Storage capacity.

(*d*) Estimated evaporation losses in the reservoir, Regulating Basin, head-race, forebay and tail-race.

(*e*) Maximum designed flood discharge, discharge-capacity curve for spillway and maximum designed flood level.

(*f*) Designated range of operation.

4. *Particulars of Design*

(*a*) Dimensioned plan showing dam, spillway, intake and outlet works, diversion works, head-race and forebay, powerhouse, tail-race and Regulating Basin.

(*b*) Type of dam, length and height above mean bed of river.

(*c*) Cross-section of the river at the site ; mean bed level.

(*d*) Type of spillway, length and crest level ; size, number and top level of spillway gates.

(*e*) Type of intake, maximum designed capacity, number and size, sill levels ; diversion works.

(*f*) Head-race and tail-race : length, size, maximum designed capacity.

(*g*) Outlet works : function, type, size, number, maximum designed capacity and sill levels.

(*h*) Discharge proposed to be passed through the Plant, initially and ultimately, and expected variations in the discharge on account of the daily and the weekly load fluctuations.

(*i*) Maximum aggregate capacity of power units (exclusive of standby units) for Firm Power and Secondary Power.

(*j*) Regulating Basin and its outlet works : type, number, size, sill levels and designed maximum discharge capacity.

5. *General*

(*a*) Estimated effect of proposed development on the flow pattern below the last plant downstream (with details of estimation).

(*b*) Probable date of completion of river works, and dates on which various stages of the Plant would come into operation.

APPENDIX III TO ANNEXURE D

(*Paragraph 19*)

1. *Location of Small Plant*

General map showing the location of the site on the Tributary and its situation with respect to the main river.

2. *Hydrologic Data*

(*a*) Observed or estimated daily Tributary discharge (observed data will be given for as long a period as available ; estimated data will be given for as long a period as possible ; in both cases, data may be limited to the latest five years).

(*b*) Flood data, observed or estimated (with details of estimation).

(*c*) Gauge-discharge curve relating to discharge site.

3. *Hydraulic Data*

(*a*) Stage-area and stage-capacity curves of the forebay with survey map on which based.

(*b*) Full Pondage Level, Dead Storage Level and Operating Pool together with the calculations for the Operating Pool.

4. *Particulars of Design*

(*a*) Dimensioned plan showing diversion works, outlet works, head-race and forebay, power-house and tail-race.

(*b*) Type of diversion works, length and height of crest or top level of gates above the mean bed of the Tributary at the site.

(*c*) Cross-section of the Tributary at the site ; mean bed level.

(*d*) Head-race and tail-race : length, size and designed maximum capacity.

(*e*) Aggregate designed maximum discharge through the turbines.

(*f*) Spillway, if any : type, length and crest level ; size, number and top level of gates.

(*g*) Maximum aggregate capacity of power units (exclusive of standby units) for Firm Power and Secondary Power.

ANNEXURE E—STORAGE OF WATERS BY INDIA ON THE WESTERN RIVERS

(Article III (4))

1. The provisions of this Annexure shall apply with respect to the storage of water on the Western Rivers, and to the construction and operation of Storage Works thereon, by India under the provisions of Article III (4).

2. As used in this Annexure :

(*a*) "Storage Work" means a work constructed for the purpose of impounding the waters of a stream ; but excludes

(i) a Small Tank,

(ii) the works specified in Paragraphs 3 and 4 of Annexure D, [1] and

(iii) a new work constructed in accordance with the provisions of Annexure D.

(*b*) "Reservoir Capacity" means the gross volume of water which can be stored in the reservoir.

(*c*) "Dead Storage Capacity" means that portion of the Reservoir Capacity which is not used for operational purposes, and "Dead Storage" means the corresponding volume of water.

[1] See p. 170 of this volume.

(*d*) "Live Storage Capacity" means the Reservoir Capacity excluding Dead Storage Capacity, and "Live Storage" means the corresponding volume of water.

(*e*) "Flood Storage Capacity" means that portion of the Reservoir Capacity which is reserved for the temporary storage of flood waters in order to regulate downstream flows, and "Flood Storage" means the corresponding volume of water.

(*f*) "Surcharge Storage Capacity" means the Reservoir Capacity between the crest of an uncontrolled spillway or the top of the crest gates in normal closed position and the maximum water elevation above this level for which the dam is designed, and "Surcharge Storage" means the corresponding volume of water.

(*g*) "Conservation Storage Capacity" means the Reservoir Capacity excluding Flood Storage Capacity, Dead Storage Capacity and Surcharge Storage Capacity, and "Conservation Storage" means the corresponding volume of water.

(*h*) "Power Storage Capacity" means that portion of the Conservation Storage Capacity which is designated to be used for generating electric energy, and "Power Storage" means the corresponding volume of water.

(*i*) "General Storage Capacity" means the Conservation Storage Capacity excluding Power Storage Capacity, and "General Storage" means the corresponding volume of water.

(*j*) "Dead Storage Level" means the level of water in a reservoir corresponding to Dead Storage Capacity, below which level the reservoir does not operate.

(*k*) "Full Reservoir Level" means the level of water in a reservoir corresponding to Conservation Storage Capacity.

(*l*) "Multi-purpose Reservoir" means a reservoir capable of and intended for use for more than one purpose.

(*m*) "Single-purpose Reservoir" means a reservoir capable of and intended for use for only one purpose.

(*n*) "Small Tank" means a tank having a Live Storage of less than 700 acre-feet and fed only from a non-perennial small stream : Provided that the Dead Storage does not exceed 50 acre-feet.

3. There shall be no restriction on the operation as heretofore by India of those Storage Works which were in operation as on the Effective Date or on the construction and operation of Small Tanks.

4. As soon as India finds it possible to do so, but not later than 31st March 1961, India shall communicate to Pakistan in writing the information specified in the Appendix[1] to this Annexure for such Storage Works as were in operation as on the Effective Date. If any such information is not available or is not pertinent to the design of the Storage Work or to the conditions at the site, it will be so stated.

5. (*a*) If any alteration proposed in the design of any of the Storage Works referred to in Paragraph 3 would result in a material change in the information furnished to

[1] See p. 198 of this volume.

Pakistan under the provisions of Paragraph 4, India shall, at least 4 months in advance of making the alteration, communicate particulars of the change to Pakistan in writing and the provisions of Paragraph 6 shall then apply.

(*b*) In the event of an emergency arising which requires repairs to be undertaken to p otect the integrity of any of the Storage Works referred to in Paragraph 3, India may undertake immediately the necessary repairs or alterations and, if these repairs or alterations result in a change in the information furnished to Pakistan under the provisions of Paragraph 4, India shall as soon as possible communicate particulars of the change to Pakistan in writing. The provisions of Paragraph 6 shall then apply.

6. Within three months of the receipt of the particulars specified in Paragraph 5, Pakistan shall communicate to India in writing any objection it may have with regard to the proposed change on the ground that the change involves a material departure from the criteria set out in Paragraph 11. If no objection is received by India from Pakistan within the specified period of three months, then Pakistan shall be deemed to have no objection. If a question arises as to whether or not the change involves a material departure from such of the criteria mentioned above as may be applicable, then either Party may proceed to have the question resolved in accordance with the provisions of Article IX (1) and (2).

7. The aggregate storage capacity of all Single-purpose and Multi-purpose Reservoirs which may be constructed by India after the Effective Date on each of the River Systems specified in Column (2) of the following table shall not exceed, for each of the categories shown in Columns (3), (4) and (5), the quantities specified therein :

		Conservation Storage Capacity		
	River System	*General Storage Capacity*	*Power Storage Capacity*	*Flood Storage Capacity*
(*1*)	(*2*)	(*3*)	(*4*)	(*5*)
		million acre-feet		
(*a*)	The Indus	0.25	0.15	Nil
(*b*)	The Jhelum (excluding the Jhelum Main) . . .	0.50	0.25	0.75
(*c*)	The Jhelum Main	Nil	Nil	As provided in Paragraph 9
(*d*)	The Chenab (excluding the Chenab Main) . . .	0.50	0.60	Nil
(*e*)	The Chenab Main	Nil	0.60	Nil

Provided that

(i) the storage specified in Column (3) above may be used for any purpose whatever, including the generation of electric energy ;

(ii) the storage specified in Column (4) above may also be put to Non-Consumptive Use (other than flood protection or flood control) or to Domestic Use ;

(iii) India shall have the option to increase the Power Storage Capacity specified against item (*d*) above by making a reduction by an equal amount in the Power Storage Capacity specified against items (*b*) or (*e*) above ; and

(iv) Storage Works to provide the Power Storage Capacity on the Chenab Main specified against item (*e*) above shall not be constructed at a point below Naunut (Latitude 33° 19′ N. and Longitude 75° 59′ E.).

8. The figures specified in Paragraph 7 shall be exclusive of the following :

(*a*) Storage in any Small Tank.

(*b*) Any natural storage in a Connecting Lake, that is to say, storage not resulting from any man-made works.

(*c*) Waters which, without any man-made channel or works, spill into natural depressions or borrow-pits during floods.

(*d*) Dead Storage.

(*e*) The volume of Pondage for hydro-electric plants under Annexure D and under Paragraph 21 (*a*).

(*f*) Surcharge Storage.

(*g*) Storage in a Regulating Basin (as defined in Annexure D).

(*h*) Storage incidental to a barrage on the Jhelum Main or on the Chenab Main not exceeding 10,000 acre-feet.

9. India may construct on the Jhelum Main such works as it may consider necessary for flood control of the Jhelum Main and may complete any such works as were under construction on the Effective Date : Provided that

(i) any storage which may be effected by such works shall be confined to off-channel storage in side valleys, depressions or lakes and will not involve any storage in the Jhelum Main itself ; and

(ii) except for the part held in lakes, borrow-pits or natural depressions, the stored waters shall be released as quickly as possible after the flood recedes and returned to the Jhelum Main lower down.

These works shall be constructed in accordance with the provisions of Paragraph 11 (*d*).

10. Notwithstanding the provisions of Paragraph 7, any Storage Work to be constructed on a Tributary of The Jhelum on which Pakistan has any Agricultural Use or hydro-electric use shall be so designed and operated as not to adversely affect the then existing Agricultural Use or hydro-electric use on that Tributary.

11. The design of any Storage Work (other than a Storage Work falling under Paragraph 3) shall conform to the following criteria :

(*a*) The Storage Work shall not be capable of raising artificially the water level in the reservoir higher than the designed Full Reservoir Level except to the extent necessary for Flood Storage, if any, specified in the design.

(*b*) The design of the works shall take due account of the requirements of Surcharge Storage.

(*c*) The volume between the Full Reservoir Level and the Dead Storage Level of any reservoir shall not exceed the Conservation Storage Capacity specified in the design.

(*d*) With respect to the Flood Storage mentioned in Paragraph 9, the design of the works on the Jhelum Main shall be such that no water can spill from the Jhelum Main into the off-channel storage except when the water level in the Jhelum Main rises above the low flood stage.

(*e*) Outlets or other works of sufficient capacity shall be provided to deliver into the river downstream the flow of the river received upstream of the Storage Work, except during freshets or floods. These outlets or works shall be located at the highest level consistent with sound and economical design and with satisfactory operation of the Storage Work.

(*f*) Any outlets below the Dead Storage Level necessary for sediment control or any other technical purpose shall be of the minimum size, and located at the highest level, consistent with sound and economical design and with satisfactory operation of the Storage Work.

(*g*) If a power plant is incorporated in the Storage Work, the intakes for the turbines shall be located at the highest level consistent with satisfactory and economical construction and operation of the plant and with customary and accepted practice of design for the designated range of the plant's operation.

12. To enable Pakistan to satisfy itself that the design of a Storage Work (other than a Storage Work falling under Paragraph 3) conforms to the criteria mentioned in Paragraph 11, India shall, at least six months in advance of the beginning of construction of the Storage Work, communicate to Pakistan in writing the information specified in the Appendix to this Annexure ; if any such information is not available or is not pertinent to the design of the Storage Work or to the conditions at the site, it will be so stated :

Provided that, in the case of a Storage Work falling under Paragraph 9,

(i) if the work is a new work, the period of six months shall be reduced to four months, and

(ii) if the work is a work under construction on the Effective Date, the information shall be furnished not later than 31st December 1960.

13. Within three months (or two months, in the case of a Storage Work specified in Paragraph 9) of the receipt by Pakistan of the information specified in Paragraph 12, Pakistan shall communicate to India in writing any objection that it may have with regard to the proposed design on the ground that the design does not conform to the criteria mentioned in Paragraph 11. If no objection is received by India from Pakistan within the specified period of three months (or two months, in the case of a Storage Work specified in Paragraph 9), then Pakistan shall be deemed to have no objection.

14. If a question arises as to whether or not the design of a Storage Work (other than a Storage Work falling under Paragraph 3) conforms to the criteria set out in Paragraph 11, then either Party may proceed to have the question resolved in accordance with the provisions of Article IX (1) and (2).

15. (*a*) If any alteration proposed in the design of a Storage Work (other than a Storage Work falling under Paragraph 3) before it comes into operation would result in a material change in the information furnished to Pakistan under the provisions of Paragraph 12, India shall immediately communicate particulars of the change to Pakistan in writing and the provisions of Paragraphs 13 and 14 shall then apply, but where a period of three months is specified in Paragraph 13, that period shall be reduced to two months.

(*b*) If any alteration proposed in the design of a Storage Work (other than a Storage Work falling under Paragraph 3), after it comes into operation would result in a material change in the information furnished to Pakistan under the provisions of Paragraph 12, India shall, at least four months in advance of making the alteration, communicate particulars of the change to Pakistan in writing and the provisions of Paragraphs 13 and 14 shall then apply, but where a period of three months is specified in Paragraph 13, that period shall be reduced to two months.

16. In the event of an emergency arising which requires repairs to be undertaken to protect the integrity of a Storage Work (other than a Storage Work falling under Paragraph 3), India may undertake immediately the necessary repairs or alterations ; if these repairs or alterations result in a change in the information furnished to Pakistan under the provisions of Paragraph 12, India shall, as soon as possible, communicate particulars of the change to Pakistan in writing to enable Pakistan to satisfy itself that after such change the design of the work conforms to the criteria specified in Paragraph 11. The provisions of Paragraphs 13 and 14 shall then apply.

17. The Flood Storage specified against item (*b*) in Paragraph 7 may be effected only during floods when the discharge of the river exceeds the amount specified for this purpose in the design of the work ; the storage above Full Reservoir Level shall be released as quickly as possible after the flood recedes.

18. The annual filling of Conservation Storage and the initial filling below the Dead Storage Level, at any site, shall be carried out at such times and in accordance with such rules as may be agreed upon between the Commissioners. In case the Commissioners are unable to reach agreement, India may carry out the filling as follows :

(*a*) if the site is on The Indus, between 1st July and 20th August ;

(*b*) if the site is on The Jhelum, between 21st June and 20th August ; and

(*c*) if the site is on The Chenab, between 21st June and 31st August at such rate as not to reduce, on account of this filling, the flow in the Chenab Main above Merala to less than 55,000 cusecs.

19. The Dead Storage shall not be depleted except in an unforeseen emergency. If so depleted, it will be refilled in accordance with the conditions of its initial filling.

20. Subject to the provisions of Paragraph 8 of Annexure C,[1] India may make releases from Conservation Storage in any manner it may determine.

21. If a hydro-electric power plant is incorporated in a Storage Work (other than a Storage Work falling under Paragraph 3), the plant shall be so operated that :

[1] See p. 162 of this volume.

(*a*) the maximum Pondage (as defined in Annexure D) shall not exceed the Pondage required for the firm power of the plant, and the water-level in the reservoir corresponding to maximum Pondage shall not, on account of this Pondage, exceed the Full Reservoir Level at any time ; and

(*b*) except during the period in which a filling is being carried out in accordance with the provisions of Paragraph 18 or 19, the volume of water delivered into the river below the work during any period of seven consecutive days shall not be less than the volume of water received in the river upstream of the work in that seven-day period.

22. In applying the provisions of Paragraph 21 (*b*) :

(*a*) the period of seven consecutive days shall commence at 8 a.m. on every Saturday and the time shall be Indian Standard Time ;

(*b*) a tolerance of 10% in volume shall be permissible and adjusted as soon as possible ; and

(*c*) any temporary uncontrollable retention of water due to variation in river supply will be accounted for.

23. When the Live Storage Capacity of a Storage Work is reduced by sedimentation, India may, in accordance with the relevant provisions of this Annexure, construct new Storage Works or modify existing Storage Works so as to make up the storage capacity lost by sedimentation.

24. If a power plant incorporated in a Storage Work (other than a Storage Work falling under Paragraph 3) is used to operate a peak power plant and lies on any Tributary of The Jhelum on which there is any Agricultural Use by Pakistan, a Regulating Basin (as defined in Annexure D) shall be incorporated.

25. If the change referred to in Paragraph 5(*a*) or 15 is not material, India shall communicate particulars of the change to Pakistan, in writing, as soon as the alteration has been made or the repairs have been undertaken. The provisions of Paragraph 6 or Paragraphs 13 and 14, as the case may be, shall then apply.

APPENDIX TO ANNEXURE E

(*Paragraphs 4 and 12*)

1. *Location of Storage Work*

General map showing the location of the site ; if on a Tributary, its situation with respect to the main river.

2. *Hydrologic Data*

(*a*) General map (Scale : ¼ inch or more = 1 mile) showing the discharge observation site or sites or rainfall gauge stations, on whose data the design is based. In case of a work on a Tributary, this map should also show the catchment area of the Tributary above the site.

(*b*) Observed or estimated daily river discharge data on which the design is based (observed data will be given for as long a period as available ; estimated data will be given for as long a period as possible ; in both cases data may be limited to the latest 25 years).

(*c*) Flood data, observed or estimated (with details of estimation).

(*d*) Gauge-discharge curve or curves for site or sites mentioned in (*a*) above.

(*e*) Sediment data.

3. *Hydraulic Data*

(*a*) Stage-area and stage-capacity curves of the reservoir with contoured survey maps on which based.

(*b*) Reservoir Capacity, Dead Storage Capacity, Flood Storage Capacity, Conservation Storage Capacity, Power Storage Capacity, General Storage Capacity and Surcharge Storage Capacity.

(*c*) Full Reservoir Level, Dead Storage Level and levels corresponding to Flood Storage and Surcharge Storage.

(*d*) Estimated evaporation losses in the reservoir.

(*e*) Maximum designed flood discharge and discharge-capacity curve for spillway.

(*f*) If a power plant is incorporated in a Storage Work :

(i) Stage-area and stage-capacity curves of forebay and Regulating Basin, with contoured survey maps on which based.

(ii) Estimated evaporation losses in the Regulating Basin, head-race, forebay and tail-race.

(iii) Designated range of operation.

4. *Particulars of Design*

(*a*) Dimensioned plan showing dam, spillway, diversion works and outlet works.

(*b*) Type of dam, length and height above mean bed of the river.

(*c*) Cross-section of the river at the site and mean bed level.

(*d*) Type of spillway, length and crest level ; size, number and top level of spillway gates.

(*e*) Type of diversion works, maximum designed capacity, number and size ; sill levels.

(*f*) Outlet works : function, type, size, number, maximum designed capacity and sill levels.

(*g*) If a power plant is incorporated in a Storage Work,

(i) Dimensioned plan showing head-race and forebay, powerhouse, tail-race and Regulating Basin.

(ii) Type of intake, maximum designed capacity, size and sill level.

(iii) Head-race and tail-race, length, size and maximum designed capacity.

(iv) Discharge proposed to be passed through the plant, initially and ultimately, and expected variations in the discharge on account of the daily and the weekly load fluctuations.

(v) Maximum aggregate capacity of power units (exclusive of standby units) for firm power and secondary power.

(vi) Regulating Basin and its outlet works : type, number, size, sill levels and designed maximum discharge capacity.

5. *General*

(*a*) Probable date of completion of river works and probable dates on which various stages of the work would come into operation.

(*b*) Estimated effect of proposed Storage Work on the flow pattern of river supplies below the Storage Work or, if India has any other Storage Work or Run-of-River Plant (as defined in Annexure D)[1] below the proposed Storage Work, then on the flow pattern below the last Storage Work or Plant.

ANNEXURE F—NEUTRAL EXPERT

(Article IX (2))

PART 1—QUESTIONS TO BE REFERRED TO A NEUTRAL EXPERT

1. Subject to the provisions of Paragraph 2, either Commissioner may, under the provisions of Article IX (2)(*a*), refer to a Neutral Expert any of the following questions :

(1) Determination of the component of water available for the use of Pakistan

(*a*) in the Ravi Main, on account of the deliveries by Pakistan under the provisions of Article II (4), and

(*b*) at various points on The Ravi or The Sutlej, on account of the deliveries by Pakistan under the provisions of Article III (3).

(2) Determination of the boundary of the drainage basin of The Indus or The Jhelum or The Chenab for the purposes of Article III (2).

(3) Whether or not any use of water or storage in addition to that provided under Article III is involved in any of the schemes referred to in Article IV (2) or in Article IV (3)(*b*) and carried out by India on the Western Rivers.

(4) Questions relating to

(*a*) obligations with respect to construction or remodelling of, or pouring of waters into, any drainage or drain as provided in Article IV (3)(*c*) and Article IV (3)(*d*) ; and

(*b*) maintenance of drainages specified in Article IV (4).

(5) Questions arising under Article IV (7) as to whether any action taken by either Party is likely to have the effect of diverting the Ravi Main between Madhopur and Lahore, or the Sutlej Main between Harike and Suleimanke, from its natural channel between high banks.

(6) Determination of facts relating to questions arising under Article IV (11) or Article IV (12).

(7) Whether any of the data requested by either Party falls outside the scope of Article VI (2).

(8) Determination of withdrawals to be made by India under proviso (iii) to Paragraph 3 of Annexure C.[2]

(9) Determination of schedule of releases from Conservation Storage under the provisions of Paragraph 8 of Annexure C.

[1] See p. 170 of this volume.
[2] See p. 162 of this volume.

(10) Whether or not any new Agricultural Use by India, on those Tributaries of The Jhelum on which there is any Agricultural Use or hydro-electric use by Pakistan, conforms to the provisions of Paragraph 9 of Annexure C.

(11) Questions arising under the provisions of Paragraph 7, Paragraph 11 or Paragraph 21 of Annexure D.[1]

(12) Whether or not the operation by India of any plant constructed in accordance with the provisions of Part 3 of Annexure D conforms to the criteria set out in Paragraphs 15, 16 and 17 of that Annexure.

(13) Whether or not any new hydro-electric plant on an irrigation channel taking off the Western Rivers conforms to the provisos to Paragraph 24 of Annexure D.

(14) Whether or not the operation of a Storage Work which was in operation as on the Effective Date substantially conforms to the provisions of Paragraph 3 of Annexure E.[2]

(15) Whether or not any part of the storage in a Connecting Lake is the result of man-made works constructed after the Effective Date (Paragraph 8 (*b*) of Annexure E).

(16) Whether or not any flood control work constructed on the Jhelum Main conforms to the provisions of Paragraph 9 of Annexure E.

(17) Whether or not any Storage Work to be constructed on a Tributary of The Jhelum on which Pakistan has any Agricultural Use or hydro-electric use conforms to the provisions of Paragraph 10 of Annexure E.

(18) Questions arising under the provisions of Paragraph 6 or 14 of Annexure E.

(19) Whether or not the operation of any Storage Work constructed by India, after the Effective Date, conforms to the provisions of Paragraphs 17, 18, 19, 21 and 22 of Annexure E and, to the extent necessary, to the provisions of Paragraph 8 of Annexure C.

(20) Whether or not the storage capacity proposed to be made up by India under Paragraph 23 of Annexure E exceeds the storage capacity lost by sedimentation.

(21) Determination of modifications to be made in the provisions of Parts 2, 4 or 5 of Annexure H[3] in accordance with Paragraphs 11, 31 or 38 thereof when the additional supplies referred to in Paragraph 66 of that Annexure become available.

(22) Modification of Forms under the provisions of Paragraph 41 of Annexure H.

(23) Revision of the figure for the conveyance loss from the head of the Madhopur Beas Link to the junction of the Chakki Torrent with the Beas Main under the provisions of Paragraph 45 (*c*) (ii) of Annexure H.

2. If a claim for financial compensation has been raised with respect to any question specified in Paragraph 1, that question shall not be referred to a Neutral Expert unless the two Commissioners are agreed that it should be so referred.

[1] See p. 170 of this volume.
[2] See p. 186 of this volume.
[3] See p. 222 of this volume.

3. Either Commissioner may refer to a Neutral Expert under the provisions of Article IX (2)(*a*) any question arising with regard to the determination of costs under Article IV (5), Article IV (11), Article VII (1)(*a*) or Article VII (1)(*b*).

PART 2—APPOINTMENT AND PROCEDURE

4. A Neutral Expert shall be a highly qualified engineer, and, on the receipt of a request made in accordance with Paragraph 5, he shall be appointed, and the terms of his retainer shall be fixed, as follows :

(*a*) During the Transition Period, by the Bank.

(*b*) After the expiration of the Transition Period,

(i) jointly by the Government of India and the Government of Pakistan, or

(ii) if no appointment is made in accordance with (i) above within one month after the date of the request, then by such person or body as may have been agreed upon between the two Governments in advance, on an annual basis, or, in the absence of such agreement, by the Bank.

Provided that every appointment made in accordance with (*a*) or (*b*)(ii) above shall be made after consultation with each of the Parties.

The Bank shall be notified of every appointment, except when the Bank is itself the appointing authority.

5. If a difference arises and has to be dealt with in accordance with the provisions of Article IX (2)(*a*), the following procedure will be followed :

(*a*) The Commissioner who is of the opinion that the difference falls within the provisions of Part 1 of this Annexure (hereinafter in this paragraph referred to as "the first Commissioner") shall notify the other Commissioner of his intention to ask for the appointment of a Neutral Expert. Such notification shall clearly state the paragraph or paragraphs of Part 1 of this Annexure under which the difference falls and shall also contain a statement of the point or points of difference.

(*b*) Within two weeks of the receipt by the other Commissioner of the notification specified in (*a*) above, the two Commissioners will endeavour to prepare a joint statement of the point or points of difference.

(*c*) After expiry of the period of two weeks specified in (*b*) above, the first Commissioner may request the appropriate authority specified in Paragraph 4 to appoint a Neutral Expert ; a copy of the request shall be sent at the same time to the other Commissioner.

(*d*) The request under (*c*) above shall be accompanied by the joint statement specified in (*b*) above ; failing this, either Commissioner may send a separate statement to the appointing authority and, if he does so, he shall at the same time send a copy of the separate statement to the other Commissioner.

6. The procedure with respect to each reference to a Neutral Expert shall be determined by him, provided that :

(*a*) he shall afford to each Party an adequate hearing;

(*b*) in making his decision, he shall be governed by the provisions of this Treaty and by the *compromis*, if any, presented to him by the Commission ; and

(*c*) without prejudice to the provisions of Paragraph 3, unless both Parties so request, he shall not deal with any issue of financial compensation.

7. Should the Commission be unable to agree that any particular difference falls within Part 1 of this Annexure, the Neutral Expert shall, after hearing both Parties, decide whether or not it so falls. Should he decide that the difference so falls, he shall proceed to render a decision on the merits ; should he decide otherwise, he shall inform the Commission that, in his opinion, the difference should be treated as a dispute. Should the Neutral Expert decide that only a part of the difference so falls, he shall, at his discretion, either :

(*a*) proceed to render a decision on the part which so falls, and inform the Commission that, in his opinion, the part which does not so fall should be treated as a dispute, or

(*b*) inform the Commission that, in his opinion, the entire difference should be treated as a dispute.

8. Each Government agrees to extend to the Neutral Expert such facilities as he may require for the discharge of his functions.

9. The Neutral Expert shall, as soon as possible, render a decision on the question or questions referred to him, giving his reasons. A copy of such decision, duly signed by the Neutral Expert, shall be forwarded by him to each of the Commissioners and to the Bank.

10. Each Party shall bear its own costs. The remuneration and the expenses of the Neutral Expert and of any assistance that he may need shall be borne initially as provided in Part 3 of this Annexure and eventually by the Party against which his decision is rendered, except as, in special circumstances, and for reasons to be stated by him, he may otherwise direct. He shall include in his decision a direction concerning the extent to which the costs of such remuneration and expenses are to be borne by either Party.

11. The decision of the Neutral Expert on all matters within his competence shall be final and binding, in respect of the particular matter on which the decision is made, upon the Parties and upon any Court of Arbitration established under the provisions of Article IX (5).

12. The Neutral Expert may, at the request of the Commission, suggest for the consideration of the Parties such measures as are, in his opinion, appropriate to compose a difference or to implement his decision.

13. Without prejudice to the finality of the Neutral Expert's decision, if any question (including a claim to financial compensation) which is not within the competence of a Neutral Expert should arise out of his decision, that question shall, if it cannot be resolved by agreement, be settled in accordance with the provisions of Article IX (3), (4) and (5).

PART 3—EXPENSES

14. India and Pakistan shall, within 30 days after the Treaty enters into force, each pay to the Bank the sum of U.S. $5,000 to be held in trust by the Bank, together with any income therefrom and any other amounts payable to the Bank hereunder, on the terms and conditions hereinafter set forth in this Annexure.

15. The remuneration and expenses of the Neutral Expert, and of any assistance that he may need, shall be paid or reimbursed by the Bank from the amounts held by it hereunder. The Bank shall be entitled to rely upon the statement of the Neutral Expert as to the amount of the remuneration and expenses of himself (determined in accordance with the terms of his retainer) and of any such assistance utilized by him.

16. Within 30 days of the rendering of a decision by the Neutral Expert, the Party or Parties concerned shall, in accordance with that decision, refund to the Bank the amounts paid by the Bank pursuant to Paragraph 15.

17. The Bank will keep amounts held by it hereunder separate from its other assets, in such form, in such banks or other depositories and in such accounts as it shall determine. The Bank may, but it shall not be required to, invest these amounts. The Bank will not be liable to the Parties for failure of any depository or other person to perform its obligations. The Bank shall be under no obligation to make payments hereunder of amounts in excess of those held by it hereunder.

18. If at any time or times the amounts held by the Bank hereunder shall in its judgment be insufficient to meet the payments provided for in Paragraph 15, it will so notify the Parties, which shall, within 30 days thereafter, pay to the Bank, in equal shares, the amount specified in such notice as being the amount required to cover the deficiency. Any amounts so paid to the Bank may, by agreement between the Bank and the Parties, be refunded to the Parties.

ANNEXURE G—COURT OF ARBITRATION

(Article IX(5))

1. If the necessity arises to establish a Court of Arbitration under the provisions of Article IX, the provisions of this Annexure shall apply.

2. The arbitration proceeding may be instituted

(*a*) by the two Parties entering into a special agreement (*compromis*) specifying the issues in dispute, the composition of the Court and instructions to the Court concerning its procedures and any other matters agreed upon between the Parties ; or

(*b*) at the request of either Party to the other in accordance with the provisions of Article IX (5)(*b*) or (*c*). Such request shall contain a statement setting forth the nature

of the dispute or claim to be submitted to arbitration, the nature of the relief sought and the names of the arbitrators appointed under Paragraph 6 by the Party instituting the proceeding.

3. The date of the special agreement referred to in Paragraph 2 (*a*), or the date on which the request referred to in Paragraph 2 (*b*) is received by the other Party, shall be deemed to be the date on which the proceeding is instituted.

4. Unless otherwise agreed between the Parties, a Court of Arbitration shall consist of seven arbitrators appointed as follows :

(*a*) Two arbitrators to be appointed by each Party in accordance with Paragraph 6 ; and

(*b*) Three arbitrators (hereinafter sometimes called the umpires) to be appointed in accordance with Paragraph 7, one from each of the following categories :

(i) Persons qualified by status and reputation to be Chairman of the Court of Arbitration who may, but need not, be engineers or lawyers.

(ii) Highly qualified engineers.

(iii) Persons well versed in international law.

The Chairman of the Court shall be a person from category (*b*) (i) above.

5. The Parties shall endeavour to nominate and maintain a Standing Panel of umpires (hereinafter called the Panel) in the following manner :

(*a*) The Panel shall consist of four persons in each of the three categories specified in Paragraph 4 (*b*).

(*b*) The Panel will be selected, as soon as possible after the Effective Date, by agreement between the Parties and with the consent of the persons whose names are included in the Panel.

(*c*) A person may at any time be retired from the Panel at the request of either Party : Provided however that he may not be so retired

(i) during the period after arbitration proceedings have been instituted under Paragraph 2 (*b*) and before the process described in Paragraph 7 (*a*) has been completed ; or

(ii) during the period after he has been appointed to a Court and before the proceedings are completed.

(*d*) If a member of the Panel should die, resign or be retired, his successor shall be selected by agreement between the Parties.

6. The arbitrators referred to in Paragraph 4 (*a*) shall be appointed as follows :

The Party instituting the proceeding shall appoint two arbitrators at the time it makes a request to the other Party under Paragraph 2 (*b*). Within 30 days of the receipt of this request, the other Party shall notify the names of the arbitrators appointed by it.

7. The umpires shall be appointed as follows :

(*a*) If a Panel has been nominated in accordance with the provisions of Paragraph 5, each umpire shall be selected as follows from the Panel, from his appropriate category, provided that the category has, at that time, at least three names on the Panel :

The Parties shall endeavour to agree to place the names of the persons in each category in the order in which they shall be invited to serve on the Court. If such agreement cannot be reached within 30 days of the date on which the proceeding is instituted, the Parties shall promptly establish such an order by drawing lots. If, in any category, the person whose name is placed first in the order so established, on receipt of an invitation to serve on the Court, declines to do so, the person whose name is next on the list shall be invited. The process shall be repeated until the invitation is accepted or all names in the category are exhausted.

(*b*) If a Panel has not been nominated in accordance with Paragraph 5, or if there should be less than three names on the Panel in any category or if no person in a category accepts the invitation referred to in Paragraph 7 (*a*), the umpires, or the remaining umpires or umpire, as the case may be, shall be appointed as follows :

(i) By agreement between the Parties.

(ii) Should the Parties be unable to agree on the selection of any or all of the three umpires, they shall agree on one or more persons to help them in making the necessary selection by agreement; but if one or more umpires remain to be appointed 60 days after the date on which the proceeding is instituted, or 30 days after the completion of the process described in sub-paragraph (*a*) above, as the case may be, then the Parties shall determine by lot for each umpire remaining to be appointed, a person from the appropriate list set out in the Appendix [1] to this Annexure, who shall then be requested to make the necessary selection.

(iii) A national of India or Pakistan, or a person who is, or has been, employed or retained by either of the Parties shall be disqualified from selection under sub-paragraph (ii) above :

Provided that

(1) the person making the selection shall be entitled to rely on a declaration from the appointee, before his selection, that he is not disqualified on any of the above grounds ; and

(2) the Parties may by agreement waive any or all of the above disqualifications in the case of any individual appointee.

(iv) The lists in the Appendix to this Annexure may, from time to time, be modified or enlarged by agreement between the Parties.

8. In selecting umpires pursuant to Paragraph 7, the Chairman shall be selected first, unless the Parties otherwise agree.

9. Should either Party fail to participate in the drawing of lots as provided in Paragraphs 7 and 10, the other Party may request the President of the Bank to nominate a person to draw the lots, and the person so nominated shall do so after giving due notice to the Parties and inviting them to be represented at the drawing of the lots.

[1] See p. 222 of this volume.

10. In the case of death, retirement or disability from any cause of one of the arbitrators or umpires his place shall be filled as follows :

(*a*) In the case of one of the arbitrators appointed under Paragraph 6, his place shall be filled by the Party which appointed him. The Court shall, on request, suspend the proceedings but for not longer than 15 days pending such replacement.

(*b*) In the case of an umpire, a new appointment shall be made by agreement between the Parties or, failing such agreement, by a person determined by lot from the appropriate list set out in the Appendix to this Annexure, who shall then be requested to make the necessary selection subject to the provisions of Paragraph 7 (*b*) (iii). Unless the Parties otherwise agree, the Court shall suspend the proceedings pending such replacement.

11. As soon as the three umpires have accepted appointment, they together with such arbitrators as have been appointed by the two Parties under Paragraph 6 shall form the Court of Arbitration. Unless the Parties otherwise agree, the Court shall be competent to transact business only when all the three umpires and at least two arbitrators are present.

12. Each Party shall be represented before the Court by an Agent and may have the assistance of Counsel.

13. Within 15 days of the date of institution of a proceeding, each Party shall place sufficient funds at the disposal of its Commissioner to meet in equal shares the initial expenses of the umpires to enable them to attend the first meeting of the Court. If either Party should fail to do so, the other Party may initially meet the whole of such expenses.

14. The Court of Arbitration shall convene, for its first meeting, on such date and at such place as shall be fixed by the Chairman.

15. At its first meeting the Court shall

(*a*) establish its secretariat and appoint a Treasurer ;

(*b*) make an estimate of the likely expenses of the Court and call upon each Party to pay to the Treasurer half of the expenses so estimated : Provided that, if either Party should fail to make such payment, the other Party may initially pay the whole of the estimated expenses ;

(*c*) specify the issues in dispute ;

(*d*) lay down a programme for submission by each side of legal pleadings and rejoinders ; and

(*e*) determine the time and place of reconvening the Court.

Unless special circumstances arise, the Court shall not reconvene until the pleadings and rejoinders have been closed. During the intervening period, at the request of either Party, the Chairman of the Court may, for sufficient reason, make changes in the arrangements made under (*d*) and (*e*) above.

16. Subject to the provisions of this Treaty and except as the Parties may otherwise agree, the Court shall decide all questions relating to its competence and shall determine

its procedure, including the time within which each Party must present and conclude its arguments. All such decisions of the Court shall be by a majority of those present and voting. Each arbitrator, including the Chairman, shall have one vote. In the event of an equality of votes, the Chairman shall have a casting vote.

17. The proceedings of the Court shall be in English.

18. Two or more certified copies of every document produced before the Court by one Party shall be communicated by the Court to the other Party ; the Court shall not take cognizance of any document or paper or fact presented by a Party unless so communicated.

19. The Chairman of the Court shall control the discussions. The discussions shall not be open to the public unless it is so decided by the Court with the consent of the Parties. The discussions shall be recorded in minutes drawn up by the Secretaries appointed by the Chairman. These minutes shall be signed by the Chairman and shall alone have an authentic character.

20. The Court shall have the right to require from the Agents of the Parties the production of all papers and other evidence it considers necessary and to demand all necessary explanations. In case of refusal, the Court shall take formal note of it.

21. The members of the Court shall be entitled to put questions to the Agents and Counsel of the Parties and to demand explanations from them on doubtful points. Neither the questions put nor the remarks made by the members of the Court during the discussions shall be regarded as an expression of an opinion of the Court or any of its members.

22. When the Agents and Counsel of the Parties have, within the time allotted by the Court, submitted all explanations and evidence in support of their case, the Court shall pronounce the discussions closed. The Court may, however, at its discretion reopen the discussions at any time before making its Award. The deliberations of the Court shall be in private and shall remain secret.

23. The Court shall render its Award, in writing, on the issues in dispute and on such relief, including financial compensation, as may have been claimed. The Award shall be accompanied by a statement of reasons. An Award signed by four or more members of the Court shall constitute the Award of the Court. A signed counterpart of the Award shall be delivered by the Court to each Party. Any such Award rendered in accordance with the provisions of this Annexure in regard to a particular dispute shall be final and binding upon the Parties with respect to that dispute.

24. The salaries and allowances of the arbitrators appointed pursuant to Paragraph 6 shall be determined and, in the first instance, borne by their Governments ; those of the umpires shall be agreed upon with them by the Parties or by the persons appointing them, and (subject to Paragraph 13) shall be paid, in the first instance, by the Treasurer. The salaries and allowances of the secretariat of the Court shall be determined by the Court and paid, in the first instance, by the Treasurer.

25. Each Government agrees to accord to the members and officials of the Court of Arbitration and to the Agents and Counsel appearing before the Court the same privileges and immunities as are accorded to representatives of members states to the principal and

subsidiary organs of the United Nations under Sections 11, 12 and 13 of Article IV of the Convention on the Privileges and Immunities of the United Nations (dated 13th February 1946) during the periods specified in these Sections. The Chairman of the Court, with the approval of the Court, has the right and the duty to waive the immunity of any official of the Court in any case where the immunity would impede the course of justice and can be waived without prejudice to the interests of the Court. The Government appointing any of the aforementioned Agents and Counsel has the right and the duty to waive the immunity of any of its said appointees in any case where in its opinion the immunity would impede the course of justice and can be waived without prejudice to the effective performance of the functions of the said appointees. The immunities and privileges provided for in this paragraph shall not be applicable as between an Agent or Counsel appearing before the Court and the Government which has appointed him.

26. In its Award, the Court shall also award the costs of the proceedings, including those initially borne by the Parties and those paid by the Treasurer.

27. At the request of either Party, made within three months of the date of the Award, the Court shall reassemble to clarify or interpret its Award. Pending such clarification or interpretation the Court may, at the request of either Party and if in the opinion of the Court circumstances so require, grant a stay of execution of its Award. After furnishing this clarification or interpretation, or if no request for such clarification or interpretation is made within three months of the date of the Award, the Court shall be deemed to have been dissolved.

28. Either Party may request the Court at its first meeting to lay down, pending its Award, such interim measures as, in the opinion of that Party, are necessary to safeguard its interests under the Treaty with respect to the matter in dispute, or to avoid prejudice to the final solution or aggravation or extension of the dispute. The Court shall, thereupon, after having afforded an adequate hearing to each Party, decide, by a majority consisting of at least four members of the Court, whether any interim measures are necessary for the reasons hereinbefore stated and, if so, shall specify such measures : Provided that

(*a*) the Court shall lay down such interim measures only for such specified period as, in its opinion, will be necessary to render the Award : this period may, if necessary, be extended unless the delay in rendering the Award is due to any delay on the part of the Party which requested the interim measures in supplying such information as may be required by the other Party or by the Court in connection with the dispute ; and

(*b*) the specification of such interim measures shall not be construed as an indication of any view of the Court on the merits of the dispute.

29. Except as the Parties may otherwise agree, the law to be applied by the Court shall be this Treaty and, whenever necessary for its interpretation or application, but only to the extent necessary for that purpose, the following in the order in which they are listed :

(*a*) International conventions establishing rules which are expressly recognized by the Parties.

(*b*) Customary international law.

APPENDIX TO ANNEXURE G

(*Paragraph* 7 (b))

List I *for selection of Chairman*	*List II* *for selection of Engineer Member*	*List III* *for selection of Legal Member*
(i) The Secretary-General of the United Nations	(i) The President of Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.	(i) The Chief Justice of the United States
(ii) The President of the International Bank for Reconstruction and Development	(ii) The Rector of the Imperial College of Science and Technology, London, England	(ii) The Lord Chief Justice of England

ANNEXURE H—TRANSITIONAL ARRANGEMENTS

(Article II (5))

PART 1—PRELIMINARY

1. The provisions of Article II (5) with respect to the distribution of the waters of the Eastern Rivers during the Transition Period shall be governed by the provisions of this Annexure. With the exception of the provisions of Paragraph 50, all the provisions of this Annexure shall lapse on the date on which the Transition Period ends. The provisions of Paragraphs 50 and 51 shall lapse as soon as the final refund or the additional payment referred to therein has been made for the last year of the Transition Period.

2. For the purposes of this Annexure, the Transition Period shall be divided into two parts : Phase I and Phase II.

3. Phase I shall begin on 1st April 1960 and it shall end on 31st March 1965, or, if the proposed Trimmu-Islam Link is not ready to operate by 31st March 1965 but is ready to operate prior to 31st March 1966 then, on the date on which the link is ready to operate. In any event, whether or not the Trimmu-Islam Link is ready to operate, Phase I shall end not later than 31st March 1966.

4. Phase II shall begin on 1st April 1965, or, if Phase I has been extended under the provisions of Paragraph 3, then on the day following the end of Phase I but in any case not later than 1st April 1966. Phase II shall end on the same date as the Transition Period.

5. As used in this Annexure :

(*a*) The term 'Central Bari Doab Channels' or 'C.B.D.C.' means the system of irrigation channels located in Pakistan which, prior to 15th August 1947, formed a part of the Upper Bari Doab Canal System.

(*b*) The terms '*kharif*' and '*rabi*' respectively mean the crop seasons extending from 1st April to 30th September (both days inclusive) and 1st October to 31st March (both days inclusive).

(*c*) The term 'Water-accounting Period' means the period which is treated as a unit for the purpose of preparing an account of the distribution of waters between India and Pakistan.

(*d*) The term 'Beas Component at Ferozepore' means the amount of flow water derived from The Beas which would have reached Ferozepore if there had been

(i) no transfers from The Ravi or contribution from The Sutlej,

(ii) no withdrawals by the canals at Harike,

(iii) no abstraction of flow waters by, or release of stored waters from, any storage reservoir on The Beas or the pond at Harike,

(iv) no withdrawals by the Shahnehr Canal in excess of those specified in Paragraph 55, and

(v) no withdrawal by any new canal from The Beas or from the Sutlej Main between Harike Below and Ferozepore constructed after the Effective Date with a capacity of more than 10 cusecs.

(*e*) The term 'Sutlej Component at Ferozepore' means the amount of flow water derived from The Sutlej which would have reached Ferozepore if there had been

(i) no transfers from The Ravi or contribution from The Beas,

(ii) no withdrawals, as at Rupar, in excess of those specified in Paragraph 21 (*a*), and

(iii) no abstraction of flow waters by, or release of stored waters from, any storage reservoir on The Sutlej or the ponds at Nangal or Harike.

PART 2—DISTRIBUTION OF THE WATERS OF THE RAVI

6. Subject to the provisions of Paragraph 20 and to the payment by Pakistan, by due date, of the amounts to be specified under the provisions of Paragraph 48, India agrees to continue the supply of water to the C.B.D.C., during the transition Period, in accordance with the provisions of Paragraphs 7 to 19. The balance of the waters of The Ravi, after India has made the deliveries specified in these Paragraphs or the releases specified in Paragraph 20, shall be available for unrestricted use by India.

7. India will deliver supplies to the C.B.D.C. throughout *rabi* and during April 1-10 and September 21-30 in *kharif* (dates as at the points of delivery, no time-lag being allowed from Madhopur to these points), at the points noted in Column (3) of Table A below, according to indents to be placed by Pakistan, up to the maximum quantity noted against each point in Column (4) of Table A :

Table A

Item	*Name of Channel*	*Point of Delivery (Approximate)*	*Maximum Quantity (cusecs)*
Col. (1)	*Col. (2)*	*Col. (3)*	*Col. (4)*
1.	Lahore Branch	R.D. 196,455	615
2.	Main Branch Lower	R.D. 250,620	1,382
3.	Pull Distributary	R.D. 74,595	10
4.	Kohali Distributary	R.D. 67,245	26
5.	Khalra Distributary	R.D. 26,900	11
6.	Bhuchar Kahna Distributary	R.D. 15,705	317
		TOTAL :	2,361

8. (*a*) The supply available in the Ravi Main, at Madhopur Above, after deducting the actual withdrawal (the deduction being limited to a maximum of 120 cusecs during April 1-10 and September 21-30 and to nil cusecs during *rabi*) for the Kashmir (Basantpur) Canal, will be taken as the 'gross supply available' : Provided that any withdrawal from The Ravi upstream of Madhopur by a new canal constructed after the Effective Date with a capacity of more than 10 cusecs will be accounted for in working out the supply available in the Ravi Main at Madhopur Above.

(*b*) From the 'gross supply available' as determined in (*a*) above, the escapages, if any, from the Upper Bari Doab Canal into The Ravi will be deducted to get the 'net supply available'. India will use its best endeavours to limit these escapages to the minimum necessary for operational requirements.

(*c*) The 'net supply available' as determined in (*b*) above, limited to a daily ceiling of 6,800 cusecs during April 1-10 and 21st September to 15th October and of 5,770 cusecs during 16th October to 31st March, will be taken as the 'distributable supply'.

9. If the 'distributable supply' falls below 6,800 cusecs during April 1-10 or 21st September to 15th October, the aggregate deliveries to the C.B.D.C. may be reduced to 34.7 per cent of the 'distributable supply'. If the 'distributable supply' falls below 5,770 cusecs during 16th October to 31st March, the aggregate deliveries to the C.B.D.C. may be reduced to 41 per cent of the 'distributable supply'.

10. If in any year after the Rasul-Qadirabad and the Qadirabad-Balloki Links are ready to operate, the average discharge for a period of five consecutive days during 21st February to 6th April in the Jhelum Main at Rasul Above (including the supply in the tail-race of the Rasul hydro-electric plant) exceeds 20,000 cusecs and the daily discharge is not less than 17,000 cusecs on any of these five days, India may, from a date four days after the expiry of the said period of five days, discontinue deliveries to the C.B.D.C. from that date until 10th April in that year : Provided that, if India should decide to exercise this option, India shall notify Pakistan telegraphically three days in advance of the date proposed for the discontinuance of deliveries.

11. As soon as the supplies specified in Paragraph 66 are available for reduction of deliveries by India during September 21-30 and *rabi*, the Commissioners will meet and agree upon suitable modifications in the provisions of this Part of this Annexure. In

case the Commissioners are unable to agree, the difference shall be dealt with by a Neutral Expert in accordance with the provisions of Annexure F.[1]

12. A rotational programme will be followed for the distribution of supplies during 16th October lo 31st March ; it will be extended, if necessary, for the distribution of supplies during 21st September to 15th October and April 1-10. This programme will be framed and, if necessary, modified by the Chief Engineer, Punjab, India, in such manner as will enable the C.B.D.C.to get the due percentage of the 'distributable supply' during each of the following Water-accounting Periods :

(i) 21st September to 15th October.

(ii) 16th October to 2nd December (*rabi* sowing period).

(iii) 3rd December to 12th February (*rabi* growing period).

(iv) 13th February to 31st March (*rabi* maturing period).

(v) April 1-10.

In framing, operating and, if necessary, modifying the rotational programme, the Chief Engineer, Punjab, will make every effort to see that, within each of the Water-accounting Periods specified above, the supplies delivered to the C.B.D.C. are spread out over the period as fairly as the prevailing circumstances permit.

13. The Chief Engineer, West Pakistan, will communicate to the Chief Engineer, Punjab (India) by 31st August each year, his suggestions, if any, for framing the next rotational programme and the Chief Engineer, Punjab, in framing that programme, will give due consideration to these suggestions. Copies of the programme shall be supplied by the Chief Engineer, Punjab, to the Chief Engineer, West Pakistan, and to the Commissioners, as early as possible but not later than 30th September each year. Copies of the modified programme shall similarly be supplied as soon as possible after the modifications have been made and the Chief Engineer, West Pakistan, and the Commissioners will be kept informed of the circumstances under which the modifications are made.

14. Neither Party shall have any claim for restitution of water not used by it when available to it.

15. India will give Pakistan adequate prior notice of any closures at the head of the Upper Bari Doab Canal during the period 21st September to 10th April. If, however, on account of any operational emergency, India finds it necessary to suddenly close the Upper Bari Doab Canal at head, or any channel specified in Table A,[2] India will notify Pakistan telegraphically.

16. No claim whatsoever shall lie against India for any interruption of supply to the C.B.D.C. due to a closure of the Upper Bari Doab Canal at head, or of any channel specified in Table A, if such closure is considered necessary by India in the interest of the safety or the maintenance of the Upper Bari Doab Canal system.

[1] See p. 202 of this volume.
[2] See p. 226 of this volume.

17. India will use its best endeavours not to pass into any of the channels listed as Items 1, 2 and 6 of Table A, any supplies in excess of 110 per cent of the corresponding figure given in Column (4) of that Table. Any supplies passed into any of the aforesaid channels in excess of 105 per cent of the corresponding figure given in Column (4) of Table A will not be taken into account in drawing up the water-account. If however the indent of any channel is less than the corresponding figure given in Column (4) of Table A, the supplies passed into that channel up to 110 per cent of the indent will be taken into account in drawing up the water-account.

18. If, because of unavoidable circumstances arising out of the inherent difficulties in the operation of the Upper Bari Doab Canal (U.B.D.C.) system, deliveries to C.B.D.C. are temporarily reduced below the amounts indented or due (whichever amounts are less), no claim for financial compensation shall lie against India on this account. India will make every effort to bring about at the earliest possible opportunity a resumption of deliveries to C.B.D.C. up to the amounts indented or due (whichever amounts are less).

19. The delivery into each of the channels specified in Table A will be regulated by India in accordance with the discharge table current for that channel on the Effective Date until that table is revised, if necessary, on the basis of

(i) any discharge observation made by India whenever it may consider necessary to do so, but not more often than once in two months ; or

(ii) any joint discharge observation by India and Pakistan which may be undertaken at the request of either Commissioner, but not more often than once in three months ; the observation shall be made within a fortnight of the receipt of the request.

India will supply to Pakistan, for each channel specified in Table A, a copy of the discharge table current on the Effective Date and of any revised discharge table prepared thereafter in accordance with (i) or (ii) above.

20. Pakistan shall have the option to request India to discontinue the deliveries to C.B.D.C. at the points specified in Table A and to release instead equal supplies (that is, those due under the provisions of Paragraphs 7 to 11) into the Ravi Main below Madhopur. This option may be exercised, effective 1st April in any year, by written notification delivered to India before 30th September preceding. On receipt of such notification, India shall comply with Pakistan's request and thereupon India shall have no obligation to make deliveries to C.B.D.C. at the points specified in Table A during the remaining part of the Transition Period, but will use its best endeavours to ensure that no abstraction is made by India below Madhopur from the supplies so released.

Part 3—Distribution of the Waters of The Sutlej and The Beas in Kharif during Phase I

21. Except as provided in Paragraphs 22, 23, 24 and 27, India agrees to limit its withdrawals during Phase I at Bhakra, Nangal, Rupar, Harike and Ferozepore (including abstractions for storage by the Bhakra Dam and for the ponds at Nangal and Harike) and by the Bachherewah Grey Canal from the flow waters (as distinct from stored waters)

present in the Sutlej Main and from the 'Beas Component at Ferozepore', in each Water-accounting Period, to the equivalent of the following :

(*a*) 10,250 cusecs from April 1-10 to July 1-10 ; 12,000 cusecs from July 11-20 to August 21-31 and 10,500 cusecs during September 1-10 to 21-30 from the Sutlej Main, as at Rupar ; *plus*

(*b*) 3,500 cusecs during April 1-10 to 21-30 ; 4,500 cusecs during May 1-10 to 21-31 and 5,500 cusecs from June 1-10 to September 21-30, as at Ferozepore, from the 'Sutlej Component at Ferozepore' and the 'Beas Component at Ferozepore', taken together : Provided that this withdrawal shall not exceed the sum of the 'Sutlej Component at Ferozepore' and 16 per cent of the 'Beas Component at Ferozepore'.

22. In addition to the withdrawals under Paragraph 21, India may make further withdrawals in each Water-accounting Period, equivalent to the amount related to Pakistan's ability to replace. This amount shall be determined as follows :

a) For each Water-accounting Period, the 'average discharge at Merala Above' shall first be worked out as follows :

i) The daily figures for the discharges at Merala Above shall be limited to a minimum equal to the figure for the appropriate Floor Discharge at Merala Above, as given in Column (2) of Table B[1] below, and to a maximum of M cusecs where M has the following values :

Period		*Value of M (cusecs)*
April	1-10	28,000
	11-20	33,000
	21-30	35,000
May	1-10	41,000
	11-20	43,000
May Sept.	21-31 to 21-30	45,000

ii) The average of the daily figures, limited in accordance with (i) above, will be taken as the 'average discharge at Merala Above', for the Water-accounting Period.

b) For each Water-accounting Period, the 'gross amount' as at Ferozepore, corresponding to the 'average discharge at Merala Above', as determined in (*a*) above, shall next be worked out from Table B, in the following manner :

When the 'average discharge at Merala Above' is equal to the Floor Discharge shown in Column (2) of Table B, the 'gross amount', as at Ferozepore, shall be zero. When the 'average discharge at Merala Above' equals or exceeds the Ceiling Discharge shown in Column (3) of Table B, the 'gross amount', as at Ferozepore, shall be the amount shown in Column (4) of Table B. For an 'average discharge at Merala Above'

[1] See p. 236 of this volume.

between those shown in Columns (2) and (3) of Table B, the 'gross amount', as at Ferozepore, shall be the proportional intermediate amount : Provided that

(i) if during April 1-10 in any year, the 'average discharge at Merala Above' is equal to 11,100 cusecs and the 'gross amount' for the whole of the preceding March, under the provisions of Paragraph 35, has been equal to zero, then for the succeeding April 11-20 the figures for Columns (2), (3) and (4) of Table B will be taken as 12,000 ; 23,400 and 8,600 respectively ; no change will be made for calculating the 'gross amount' in any subsequent Water-accounting Period in that year, but if, in addition to the conditions already stated for April 1-10, the 'average discharge at Merala Above', during April 11-20, equals 12,000 cusecs, then for the succeeding April 21-30 the figures for Columns (2), (3) and (4) of Table B will be taken as 12,100 ; 23,500 and 8,600 respectively ; no change will be made for calculating the 'gross amount' in any subsequent Water-accounting Period in that year ;

(ii) if during March 21-31 in any year, the average discharge at Merala Above (obtained by limiting the daily values to a maximum of 27,000 cusecs) exceeds 22,000 cusecs, then for the succeeding April 1-10 the figures for Columns (2), (3) and (4) of Table B will be taken as 11,100 ; 26,700 and 12,900 respectively ; no change will be made for any subsequent Water-accounting Period in that year ; and

(iii) if, during any Water-accounting period from April 1-10 to September 21-30, the Upper Chenab Canal (U.C.C.) and M.R. Link are both closed at head (any day, on which some supplies are passed into U.C.C. in order that the head across the U.C.C. Head Regulator should not exceed 17 feet, being treated as a day of closure), on account of the discharge on any day in the Jammu Tawi having exceeded 30,000 cusecs, or on account of the discharge at Merala Above on any day having exceeded 200,000 cusecs, the 'gross amount', as at Ferozepore, will be worked out as follows :

For each of the days for which both U.C.C. and M.R. Link remain closed at head, the 'gross amount', as at Ferozepore, shall be taken as 108 per cent of Q during April 1-10 to August 21-31 and 100 per cent of Q during September 1-10 to 21-30, where Q equals 67 per cent of the corresponding actual river supply at Balloki Above (allowing three days time-lag from Merala to Balloki) ***minus*** 300 cusecs ; Q being limited to 8.000 cusecs during April 1-10, to 11,000 cusecs during April 11-20, to 13,000 cusecs during April 21-30, and to 15,000 cusecs from May 1-10 to September 21-30. For the remaining days in the Water-accounting Period, the 'gross amount' shall be worked out on the basis of the average of the daily discharges at Merala Above for those days, the daily discharges being limited, where necessary, in accordance with (*a*) (i) above. The 'gross amount', for the Water-accounting Period taken as a whole, will be taken as equal to the sum of the 'gross amount' for each of the days of closure *plus* the 'gross amount' for the remaining days of the Water-accounting Period multiplied by the corresponding number of days, the aggregate being divided by the total number of days in the Water-accounting Period.

Pakistan will notify India about any such closure by telegram stating therein the discharge of Jammu Tawi, the discharge at Merala Above and the discharge of U.C.C. at head, and will continue to supply similar information daily by telegram till the U.C.C. and M.R. Link are re-opened.

Table B

Period		*Floor Discharge at Merala Above*	*Ceiling Discharge at Merala Above*	*'Gross amount' as at Ferozepore, corresponding to the Ceiling Discharge*	*Factor to be applied to the 'gross amount' as determined under Paragraph 22(b)*
Col. (1)		*Col. (2)*	*Col. (3)*	*Col. (4)*	*Col. (5)*
		cusecs			
April	1-10	11,100	22,500	8,600	0.60
	11-20	12,000	27,600	12,900	0.60
	21-30	12,100	30,000	16,000	0.60
May	1-10	18,000	37,100	17,300	0.60
	11-20	19,900	39,000	17,300	0.65
	21-31	21,600	40,900	17,300	0.70
June	1-10	19,100	38,100	17,300	0.70
	11-20	22,900	41,900	17,300	0.70
	21-30	22,700	41,500	17,300	0.70
July	1-10	20,200	38,900	17,300	0.70
	11-20	22,000	41,200	17,300	0.70
	21-31	20,000	39,900	18,400	0.70
Aug.	1-10	14,100	33,700	18,400	0.70
	11-20	15,000	34,500	18,400	0.70
	21-31	18,300	37,300	18,400	0.70
Sept.	1-10	20,400	39,700	17,200	0.70
	11-20	22,200	40,400	17,200	0.70
	21-30	21,100	39,300	17,200	0.70

(*c*) The 'gross amount', as at Ferozepore, as determined under (*b*) above, will then be multiplied by the corresponding factor in Column (5) of Table B to obtain the amount of further withdrawals by India, as at Ferozepore.

23. During September 11-20 and September 21-30, an adjustment shall be made in the withdrawals which India may make under the provisions of Paragraphs 21 and 22 by adding the actual gains in the Sutlej Main from Ferozepore to Islam to the value determined under the provisions of Paragraphs 21 and 22 and deducting from the resulting total 3,400 cusecs during September 11-20 and 2,900 cusecs during September 21-30.

24. If, in any Water-accounting Period, the sum of (i) and (ii) below exceeds 35,000 cusecs during April 1-10 to August 21-31, or 30,000 cusecs during September, then India may make further withdrawals, as at Ferozepore, from the flow waters of The Sutlej and The Beas to the extent of the excess over 35,000 cusecs or 30,000 cusecs, as the case may be.

(i) The supply available from the 'Sutlej Component at Ferozepore' and from the 'Beas Component at Ferozepore' *less* the withdrawals due to be made by India under the provisions of Paragraphs 21 (*b*), 22 and 23.

(ii) The appropriate 'gross amount', as at Ferozepore, determined in accordance with Paragraph 22 (*b*).

25. After allowing for the withdrawals by India under the provisions of Paragraphs 21 (*b*), 22, 23 and 24, the balance of the 'Sutlej Component at Ferozepore' and of the 'Beas Component at Ferozepore' shall be delivered at Ferozepore for use by the Pakistan Sutlej Valley Canals.

26. Pakistan undertakes that, between 1st April and 30th June, and between 11th and 30th September, when the flow at Merala Above on any day is less than the appropriate Ceiling Discharge shown in Column (3) of Table B, it will not allow surplus water to escape below Khanki or below Balloki (except in circumstances arising out of an operational emergency or out of inherent difficulties in the operation of the system of works) and will cause such surplus waters to be transferred to Suleimanke. If, however, there should be spill at Khanki or at Balloki because of the afore said circumstances, Pakistan will immediately inform India of the reasons for such spill and take steps to discontinue the spill as soon as possible.

27. If the aggregate of (i) and (ii) below does not exceed 35,000 cusecs during any Water-accounting Period from April 1-10 to June 21-30, or 30,000 cusecs during September 11-20 or 21-30, and if Pakistan expects at any time during any of these Water-accounting Periods, that on one or more days it would be unable to use in its Sutlej Valley Canals the supplies likely to be available to it under the provisions of Paragraph 25 and the probable transfers under Paragraph 26, and that there is, therefore, a likelihood of escapage below Islam, Pakistan agrees that it will give such timely information to India as will enable India to make such additional withdrawals at or above Ferozepore on the day or days to be specified as will reduce the escapage below Islam to a minimum.

(i) The likely delivery to Pakistan at Ferozepore under the provisions of Paragraph 25.

(ii) The probable appropriate 'gross amount', as at Ferozepore, determined in accordance with Paragraph 22 (*b*).

Provided that the above provisions shall not apply during any Water-accounting Period in which (i) above is zero.

28. Subject to the provisions of Paragraph 64 and to the payment by Pakistan, by due date, of the amounts to be specified under the provisions of Paragraph 49, India agrees to deliver into the Dipalpur Canal at Ferozepore, during each Water-accounting Period, such part of the supplies due to be released by India under the provisions of Paragraph 25, as Pakistan may request, limited to a maximum of 6,950 cusecs : Provided that no claim shall lie against India if, because of circumstances arising out of the inherent difficulties in feeding the Dipalpur Canal, the supply delivered into the Dipalpur Canal should at any time fall below the supply requested by Pakistan to be fed into this Canal out of the total supplies due to be released by India at Ferozepore.

PART 4—DISTRIBUTION OF THE WATERS OF THE SUTLEJ AND THE BEAS IN KHARIF DURING PHASE II

29. Subject to the provisions of Paragraphs 30 and 31 below, India agrees to deliver at Ferozepore for use by the Pakistan Sutlej Valley Canals the following minimum supplies during Phase II :

(*a*) In each Water-accounting Period during April 1-30 : 74 per cent of the amount calculated for delivery at Ferozepore under the provisions of Paragraph 25 *minus* 21 per cent of the 'gross amount' determined in accordance with Paragraph 22 (*b*) : Provided that, during April 1-10 in any year, if the discharge at Trimmu Above is less than 8,500 cusecs, the delivery during April 1-10 in that year shall be the same as under the provisions of Paragraph 25.

(*b*) In each Water-accounting Period during May 1-31 : 71 per cent of the amount calculated for delivery at Ferozepore under the provisions of Paragraph 25 *minus* 24 per cent of the 'gross amount' determined in accordance with Paragraph 22 (*b*).

(*c*) In each Water-accounting Period during June 1-30 : 58 per cent of the amount calculated for delivery at Ferozepore under the provisions of Paragraph 25 *minus* 36 per cent of the 'gross amount' determined in accordance with Paragraph 22 (*b*).

(*d*) July 1-10 : 3,000 cusecs.

(*e*) July 11-20 to August 21-31 : 4,000 cusecs.

(*f*) September 1-10 : 3,000 cusecs.

(*g*) September 11-20 and 21-30 : As under the provisions of Part 3 of this Annexure reduced by the following :

66 per cent of the amount by which the discharge at Trimmu Above (corrected for actual gains and losses between Trimmu and Panjnad, allowing a time-lag of three days from Trimmu to Panjnad) exceeds the smaller of the following two quantities :

(i) the sum of the actual withdrawals by the Panjnad and Haveli canals ; and

(ii) 19,600 cusecs :

Provided that the gains from Trimmu to Panjnad shall be deemed to be limited to the actual withdrawals at Panjnad and provided further that the reduction, as thus calculated, shall be limited to a daily maximum of 7,000 cusecs and shall not exceed one-third of the sum of the supply which would have been delivered at Ferozepore under the provisions of Paragraph 25 and the 'gross amount' determined in accordance with Paragraph 22 (*b*).

30. As soon as the Rasul-Qadirabad and the Qadirabad-Balloki Links are ready to operate, the deliveries at Ferozepore for use by the Pakistan Sutlej Valley Canals, as specified in Paragraph 29, may be reduced

(*a*) in each Water-accounting Period during April 1-10 to June 21-30, by (AX-AB) cusecs limited to (AY) cusecs where

X = the actual discharge at Rasul Above (including the supply in the tail-race of the Rasul hydro-electric plant),

Y = difference between 18,400 cusecs (limited during April 1-10 to 21-30 to the 'gross amount' as at Ferozepore corresponding to the Ceiling Discharge in Table B, read with provisos (i) and (ii) of Paragraph 22 (*b*)) and the actual 'gross amount' worked out under Paragraph 22 (*b*),

A = a factor equal to 0.60 from April 1-10 to May 1-10, 0.65 for May 11-20, and 0.70 from May 21-31 to June 21-30, and

B = 24,000 cusecs from April 1-10 to 21-30,
32,000 cusecs from May 1-10 to 21-31 and
40,500 cusecs from June 1-10 to 21-30 ; and

(*b*) during July 1-10 and 11-20, by 1,000 cusecs.

31. As soon as the supplies specified in Paragraph 66 are available for reduction of deliveries by India during September, the Commissioners will meet and agree upon modifications in the provisions relating to the deliveries at Ferozepore during September 11-20 and 21-30. In case the Commissioners are unable to agree, the difference shall be dealt with by a Neutral Expert in accordance with the provisions of Annexure F.

32. Subject to the provisions of Paragraph 64 and to the payment by Pakistan, by due date, of the amounts to be specified under the provisions of Paragraph 49, India will arrange to deliver into the Dipalpur Canal at Ferozepore, during each Water-accounting Period, such part of the supplies due to be released for Pakistan under the provisions of Paragraphs 29, 30 and 31 as Pakistan may request, limited to a maximum of 6,950 cusecs : Provided that no claim shall lie against India if, because of circumstances arising out of the inherent difficulties in feeding the Dipalpur Canal, the supply delivered into the Dipalpur Canal should at any time fall below the supply requested by Pakistan to be fed into this canal out of the total supplies due to be released by India at Ferozepore.

33. Subject to the provisions of Paragraphs 29 to 32 and Paragraph 57, there shall be no restriction on the use by India of the waters of The Sutlej and The Beas in *kharif* during Phase II.

Part 5—Distribution of the Waters of The Sutlej and The Beas in Rabi

34. Subject to the provisions of Paragraphs 35 to 38, during the Transition Period India agrees to deliver at Ferozepore for use by the Pakistan Sutlej Valley Canals, the following minimum supplies during *rabi* :—

(*a*) October 1-10 and October 11-15 : (i) 84 per cent of the 'Beas Component at Ferozepore' *plus* (ii) 1,670 cusecs *minus* (iii) the actual gains from Ferozepore to Islam.

(*b*) October 16-20 : (i) 79 per cent of the 'Beas Component at Ferozepore' *plus* (ii) 960 cusecs *minus* (iii) the actual gains from Ferozepore to Islam.

(*c*) October 21-31 : (i) 79 per cent of the 'Beas Component at Ferozepore' *plus* (ii) 640 cusecs *minus* (iii) the actual gains from Ferozepore to Islam.

(*d*) November 1-10 : (i) 79 per cent of the 'Beas Component at Ferozepore' *plus* (ii) 570 cusecs *minus* (iii) the actual gains from Ferozepore to Islam.

(*e*) In each Water-accounting Period from November 11-20 to March 21-31 : 79 per cent of the 'Beas Component at Ferozepore'.

35. When the flow at Trimmu Above, during March 1-10, 11-20 and 21-31 in any year, exceeds the smaller of the following two quantities :

(i) the supplies required at Trimmu Above to meet the withdrawals of the Haveli and Panjnad Canals (after allowing a time-lag of five days from Trimmu to Panjnad), and

(ii) 7,500 cusecs during Phase I or 10,000 cusecs during Phase II,

the deliveries specified in Paragraph 34 (*e*) may be reduced, during March 1-10, 11-20 and 21-31 in that year, by amounts related to Pakistan's ability to replace. For March 1-10, 11-20 and 21-31, these amounts shall be taken as equal to 60 per cent of the 'gross amount' determined as follows :

When the sum of (*a*) the average discharge at Merala Above (obtained by limiting the daily values to a maximum of 25,000 cusecs during March 1-10, a maximum of 26,000 cusecs during March 11-20 and a maximum of 27,000 cusecs during March 21-31) and (*b*) the Ravi Component at Balloki Above (total supply at Balloki Above *minus* the delivery at U.C.C. tail *minus* the delivery at M.R. Link outfall *minus* the delivery into the Ravi Main through B.R.B.D. escapes, the result being limited to a minimum of zero) is less than or equal to the Floor Discharge shown in Column (2) of Table C below, the 'gross amount', as at Ferozepore, shall be zero. When this sum equals or exceeds the Ceiling Discharge shown in Column (3) of Table C, the 'gross amount', as at Ferozepore, shall be the amount shown in Column (4) of Table C. When the sum is between the values shown in the said Columns (2) and (3), the 'gross amount', as at Ferozepore, shall be the proportional intermediate amount.

Table C

Period	*Floor Discharge*	*Ceiling Discharge*	*'Gross amount', as at Ferozepore, corresponding to the Ceiling Discharge*
Col. (1)	*Col. (2)*	*Col. (3)*	*Col. (4)*
		cusecs	
March 1-10	14,500	21,200	5,000
11-20	14,500	22,000	6,000
21-31	14,500	24,000	8,000

36. If, during any Water-accounting Period, the aggregate of (i), (ii) and (iii) below exceeds 25,000 cusecs during October 1-10 and 11-15 or 10,000 cusecs from October 16-20 to March 21-31, the deliveries due to be made under the provisions of Paragraphs 34 and 35 may be reduced by the amount of such excess over 25,000 cusecs or 10,000 cusecs, as the case may be.

(i) Deliveries due to Pakistan at Ferozepore under the provisions of Paragraphs 34 and 35.

(ii) During March only, 60 per cent of the appropriate 'gross amount', as worked out under Paragraph 35.

(iii) During October 1-10 to November 1-10 only, the actual gains from Ferozepore to Islam, or, under the circumstances specified in Paragraph 62, the estimated gains agreed upon between the Commissioners.

37. In Phase II, during March, the deliveries to Pakistan, under the provisions of Paragraphs 34 to 36, may on any day be reduced by 60 per cent of the amount by which the discharge at Trimmu Above two days earlier exceeds 10,000 cusecs, but the reduction on this account shall not exceed 12 per cent of the 'Beas Component at Ferozepore'.

38. As soon as the supplies specified in Paragraph 66 are available for reduction of deliveries by India during *rabi*, the Commissioners will meet and agree upon modifications in the deliveries to be made by India at Ferozepore during *rabi*. In case the Commissioners are unable to agree, the difference shall be dealt with by a Neutral Expert in accordance with the provisions of Annexure F.

39. Subject to the provision of Paragraph 64 and to the payment by Pakistan, by due date, of the amounts to be specified under the provisions of Paragraph 49, India agrees to deliver into the Dipalpur Canal at Ferozepore, during October 1-10 and 11-15 in each year, such part of the supplies due to be released for Pakistan under the provisions of Paragraphs 34 to 38 as Pakistan may request, limited to a maximum of 6,950 cusecs : Provided that no claim shall lie against India if, because of circumstances arising out of the inherent difficulties in feeding the Dipalpur Canal, the supply delivered into the Dipalpur Canal should at any time fall below the supply requested by Pakistan to be fed into this canal out of the total supplies due to be released by India at Ferozepore.

40. Subject to the provisions of Paragraphs 34 to 38 and Paragraph 57, there shall be no restriction on the use by India of the waters of The Sutlej and The Beas during *rabi*.

Part 6—Water-accounts at Ferozepore

41. An account of the distribution of waters, as at Ferozepore, under the provisions of Parts 3, 4 and 5 of this Annexure will be maintained by each Commissioner in accordance with the provisions of Paragraphs 42 to 46, and appropriate Forms will be used, both for Phase I and Phase II, in order to facilitate, and to provide a record of, the distribution of waters in accordance with the provisions of this Annexure. Such Forms for Phase I are set out in Appendix II [1] to this Annexure. Appropriate Forms for Phase II will be prepared by the Commission. The Forms (both for Phase I and Phase II) may, from time to time, be modified or added to by the Commission, but only to the extent that the Commission finds it necessary to do so in order to further facilitate, and to maintain an appropriate record of, the distribution of waters in accordance with the provisions of this Annexure. In the absence of agreement in the Commission, the question shall be referred to a Neutral Expert for decision in accordance with the provisions of Annexure F.

[1] See p. 264 of this volume.

42. Each calendar month will be divided into three Water-accounting Periods, viz., 1st to 10th, 11th to 20th and 21st to the last day of the month, except the month of October which will be divided into four Water-accounting Periods, viz., 1st to 10th, 11th to 15th, 16th to 20th and 21st to 31st.

43. For each Water-accounting Period, the river supplies or withdrawals or deliveries at any point will, unless otherwise specified in this Annexure, be taken as the average values of the daily figures for the days included in or corresponding to that Water-accounting Period.

44. The water-accounts for the period April 1-10 to July 1-10 (Ferozepore dates) will be prepared with due allowance for time-lag as set out in Appendix I [1] to this Annexure.

45. (*a*) The 'Sutlej Component at Ferozepore' during each Water-accounting Period from April 1-10 to September 21-30 and the 'Beas Component at Ferozepore' during each Water-accounting Period from April 1-10 to March 21-31 shall be worked out in accordance with Appendix I to this Annexure.

(*b*) During the Water-accounting Periods from September 11-20 to November 1-10, the gains and losses in the reach from Ferozepore to Islam shall be taken as the actual gains or losses calculated without allowance for time-lag.

(*c*) A conveyance loss of 6 per cent from the head of the Madhopur Beas Link to the junction of the Chakki Torrent with the Beas Main shall be adopted until revised, at the request of either Commissioner, as follows :

(i) The figure may be revised by agreement between the Commissioners, either after a study of available data and general considerations or after an analysis of discharge observations to be carried out jointly by the Commissioners, at the request of either Commissioner, or

(ii) if the Commissioners are unable to agree on a suitable figure (or figures) for the conveyance losses, the matter may be referred to a Neutral Expert for decision in accordance with the provisions of Annexure F.

(*d*) The procedure for working out the equivalents, at Mandi Plain, of any withdrawals from the Beas Main by any new canal constructed after the Effective Date, with a capacity of more than 10 cusecs, or of any abstractions from the flow waters by, or releases of stored waters from, any reservoir on The Beas will be determined by the Commission at the appropriate time.

(*e*) An allowance for run-out *(Nikal)* shall be made in the water-account in respect of the waters passed into The Beas by the M.B. Link (including escapages from the U.B.D.C. into The Beas). This allowance shall equal the volume of water passed by the Link (including escapages from U.B.D.C.) into The Beas on the last two days of the operation of the Link during the period from 1st September to 15th October and it shall be accounted for at Mandi Plain during the ten days following the closure of the Link : Provided that this allowance shall be made only once and if the Link is re-opened thereafter, no further allowance on that account shall be made.

[1] See p. 262 of this volume.

46, Every effort will be made by India to balance the water-account at Ferozepore for each of the Water-accounting Periods, but any excess or deficit in deliveries due to Pakistan, in any Water-accounting Period, under the provisions of this Annexure, that may arise out of the inherent difficulties in determining these deliveries shall be carried over to the next Water-accounting Period for adjustment : Provided that :

(*a*) If, in any Water-accounting Period during Phase I, the sum of (i), (ii) and (iii) below exceeds 35,000 cusecs during April 1-10 to August 21-31, 30,000 cusecs during September 1-10 to 21-30, 25,000 cusecs during October 1-10 or 11-15, or 10,000 cusecs during October 16-20 to March 21-31, then there will be no carry-over from any such period to the next period.

(i) The supply at Ferozepore Below (including withdrawals by the Dipalpur Canal, if any).

(ii) During March 1-10 to September 21-30, the appropriate 'gross amount', as at Ferozepore, determined in accordance with Paragraph 22 (*b*) or Paragraph 35.

(iii) During September 11-20 to November 1-10, the actual gains and losses from Ferozepore to Islam, losses being treated as negative gains ; or, under the circumstances specified in Paragraph 62, the estimated gains agreed upon between the Commissioners.

(*b*) If, in any Water-accounting Period, the indents of the Indian Canals at Ferozepore and Harike have been fully met and there is an excess delivery to Pakistan at Ferozepore, then such excess shall not be carried forward to the next period.

(*c*) In each year, the water-account shall be finally closed at the end of the Water-accounting Period March 21-31 and any excess or deficit in the water-account, at the end of that Period, shall not be carried over to the succeeding Water-accounting Period, viz., April 1-10.

(*d*) If, during Phase I, in any Water-accounting Period from April 1-10 to June 21-30, the withdrawals computed as due to India under the provisions of Paragraphs 21 (*b*), 22, 23 and 24 exceed the supply available to India from the 'Sutlej Component at Ferozepore' and from the 'Beas Component at Ferozepore' taken together, then, in the water-account only 50 per cent of such excess shall be carried over for use by India.

(*e*) If, during Phase II, in any Water-accounting Period from April 1-10 to June 21-30, the withdrawals computed as due to India from the 'Sutlej Component at Ferozepore' and from the 'Beas Component at Ferozepore' after allowing for the deliveries due to Pakistan at Ferozepore under the provisions of Paragraphs 29 and 30 exceed the supply available to India from the 'Sutlej Component at Ferozepore' and from the 'Beas Component at Ferozepore', then such excess shall be treated separately and accounted for as below :

(i) The excess may be carried over for adjustment to the succeeding Water-accounting Period and, where necessary, to the next succeeding Water-accounting Period, but shall be deemed to have lapsed if not adjusted by then.

(ii) The cumulative excess carried over shall not exceed 2,000 cusecs from April 1-10 to May 21-31 and 3,000 cusecs during June 1-10 to 21-30.

(iii) In no case shall the excess be carried over beyond June 21-30.

47. As soon as possible after the end of each Water-accounting Period, each Commissioner will intimate to the other, by telegram, the excess or deficit carried over to the next Water-accounting Period. On receipt of this information, either Commissioner may, if he considers it necessary, ask for an exchange of the relevant water-accounts.

PART 7—FINANCIAL PROVISIONS

48. For each year for which Pakistan has not exercised the option under the provisions of Paragraph 20 :

(*a*) India will, by 1st February preceding, communicate to Pakistan, in writing, the estimated proportionate working expenses payable by Pakistan for the Madhopur Headworks and the carrier channels calculated in accordance with Appendix III[1] to this Annexure ; and

(*b*) Pakistan will pay to the Reserve Bank of India, New Delhi, for the credit of the Government of India, before 1st April of that year, the amount intimated by India.

49. For each year for which Pakistan has not exercised the option under the provisions of Paragraph 64 :

(*a*) India will, by 1st February preceding, communicate to Pakistan, in writing, the estimated proportionate working expenses payable by Pakistan for the Ferozepore Headworks (including the part of the Dipalpur Canal in India) calculated in accordance with Appendix IV[2] to this Annexure ; and

(*b*) Pakistan will pay to the Reserve Bank of India, New Delhi, for the credit of the Government of India, before 1st April of that year, the amount intimated by India.

50. As soon as the figures of actual audited expenditures on the Madhopur Headworks and the carrier channels and on the Ferozepore Headworks for each year are supplied by the Accountant General, Punjab (India), but not later than one year after the end of the year to which the expenditure relates, India will communicate to Pakistan, in writing, the actual expenditure corresponding to the estimated proportionate working expenses paid by Pakistan under the provisions of Paragraphs 48 (*b*) and 49 (*b*). If the actual proportionate expenditure is less than the amount paid by Pakistan under the provisions of Paragraphs 48 (*b*) and 49 (*b*), India shall, within one month, refund the difference to Pakistan and if the actual proportionate expenditure is more than the amount paid, Pakistan shall, within one month, make an additional payment to India to cover the difference.

51. The payments by Pakistan to India under the provisions of Paragraphs 48, 49 and 50 and the refund by India under the provisions of Paragraph 50 shall be made without any set off against any other financial transaction between the Parties.

[1] See p. 286 of this volume.
[2] See p. 288 of this volume.

PART 8—EXTENSION OF TRANSITION PERIOD

52. In the event that Pakistan is of the opinion that the replacement referred to in Article IV (1) cannot be effected unless the Transition Period is extended beyond 31st March 1970, this period may be extended at the request of Pakistan

(*a*) by one, two or three years beyond 31st March 1970 ; or

(*b*) having been extended initially by one year beyond 31st March 1970, then by one or two years beyond 31st March 1971 ; or

(*c*) having been extended initially by two years beyond 31st March 1970, or having been extended by one year beyond 31st March 1971 under (*b*) above, then by one more year beyond 31st March 1972.

53. A request by Pakistan for any extension under the provisions of Paragraph 52 shall be made to India by formal notice in writing, and any such notice shall specify the date up to which Pakistan requests an extension under the aforesaid provisions. On the receipt of such notice by India within the time-limit specified in Paragraph 54, the Transition Period shall be extended up to the date requested by Pakistan.

54. A formal notice under Paragraph 53 shall be given as early as possible and, in any event, in such manner as to reach India at least twelve months before the due date for the expiration of the Transition Period. Unless such a notice is received by India within this time-limit, the Transition Period shall expire on the due date without any right of extension or further extension : Provided however that the Transition Period shall be extended, within the provisions of Paragraph 52, by an exceptional notice of request for an extension received by India not later than five months before the due date for expiration of the Transition Period, if, within the twelve months prior to such due date, heavy flood damage should have occurred which, in the opinion of Pakistan, cannot be repaired in time to operate the system of works as planned.

PART 9—GENERAL

55. India may continue to irrigate from the Eastern Rivers those areas which were so irrigated, as on the Effective Date, from The Sutlej, The Beas or The Ravi by means other than the canals taking off at Madhopur, Nangal, Rupar, Harike and Ferozepore : Provided that

(i) any withdrawals by the Shahnehr Canal in excess of 940 cusecs during any Water-accounting Period shall be accounted for in the estimation of the 'Beas Component at Ferozepore', and

(ii) the capacity of the Shahnehr Canal shall not be increased beyond its actual capacity as on the Effective Date (about 1,000 cusecs).

If India should construct a barrage across the Beas Main below the head of the Shahnehr Canal or undertake such other works as would enable the Canal to increase its withdrawals by more than 50 cusecs over and above those attained as on the Effective Date, the withdrawals during each Water-accounting Period in excess of the average withdrawals for each such period during the five years preceding the completion of the barrage or of such other works shall be accounted for in the estimation of the 'Beas Component at Ferozepore'.

56. India agrees that, from 21st September to 31st March, it will not make any withdrawals for Agricultural Use by Government canals or by power pumps from the Ravi Main below Madhopur, in excess of the withdrawals as on the Effective Date.

57. Subject to the provisions of Paragraph 55, India agrees that it will not make any withdrawals for Agricultural Use from the Sutlej Main below Ferozepore from the supplies delivered at Ferozepore for use by the Pakistan Sutlej Valley Canals.

58. India shall be entitled to utilise without restriction the waters stored by it (in accordance with the provisions of this Annexure) in any reservoir on the Eastern Rivers or in the ponds at Nangal or Harike.

59. Pakistan agrees that

(i) it will have filled the ponds at Suleimanke and Islam by 10th September in each year to the maximum extent possible without causing the maximum working head across the weirs and the maximum pond levels to exceed the values given in Table D below :

Table D

Weir	*Maximum working head in feet*	*Maximum pond level (R. L.)*
Suleimanke	18.5	569.0
Islam	18.0	452.0

(ii) after the river has fallen to a stage at which the releases from the ponds will not result in a spill below Islam, it will lower the pond levels gradually to R.L. 565.5 at Suleimanke and R.L. 449.0, or lower if possible, at Islam, and complete the lowering, as far as possible, by 31st October, without spilling below Islam ; and

(iii) it will use its best endeavours to fill the pond at Islam to R.L. 455.0, provided that this does not endanger the safety of the weir :

Provided that the above provisions in so far as they relate to the Islam Weir shall lapse on the date Pakistan discontinues the use of this weir. Instead, the pond at the new weir below Islam shall be filled by 10th September each year and lowered by 31st October in accordance with the above provisions, but the maximum working head in feet, the maximum pond level and the level to which the pond is to be lowered by 31st October shall be determined in accordance with the design of the new weir.

60. Pakistan agrees that it will not release any water below the barrage at Suleimanke between 13th October and 10th November, except when the supply reaching Suleimanke on any day (including the delivery, if any, from B.S. Link tail) is in excess of 6,000 cusecs, when the excess on that day over 4,000 cusecs may be released. If the supply reaching Islam falls below 350 cusecs, Pakistan may release supplies below Suleimanke provided that such releases shall be so regulated that the supply reaching Islam does not

appreciably exceed 20 per cent of the sum of the withdrawals, at head, of the perennia Pakistan Sutlej Valley Canals.

61. Pakistan agrees that from 21st August to 15th September it will, except under unavoidable circumstances, run the B.S. Link with a discharge not less than 13,000 cusecs, at head.

62. If, for any reason, Pakistan is unable to adhere to the programme for filling and emptying the ponds at Suleimanke and Islam, as set out in Paragraph 59, the Commissioners will agree on an estimate of the gains which would have accrued in the reach from Ferozepore to Islam but for Pakistan's inability to adhere to the aforesaid programme and these estimated gains will be used in the water-account instead of the actual gains or losses.

63. In the event of an emergency, leading to circumstances under which Pakistan is unable to fulfil the provisions of Paragraph 61, the actual gains or losses will be used in the water-account, and the Pakistan Commissioner will immediately inform the Indian Commissioner of the emergency and take steps to restore normal conditions as soon as possible.

64. Pakistan shall have the option to request India to discontinue the deliveries into the Dipalpur Canal. This option may be exercised effective 1st April in any year by written notification delivered to India before 30th September preceding. On receipt of such notification, India will cease to have any obligation to make deliveries into the Dipalpur Canal during the remaining part of the Transition Period.

65. If, owing to heavy floods,

(i) damage should occur to any of the Link Canals (including Headworks) specified in Column (1) below during the period specified for that particular Link Canal in Column (2) below, and,

(ii) as a result of such damage, the ability of that Link Canal to transfer supplies should have been diminished to an extent causing serious interruption of supplies in irrigation canals dependent on that Link Canal,

then the two Commissioners will promptly enter into consultations, with the good offices of the Bank, to work out the steps to be taken to restore the situation to normal and to work out such temporary modifications of the relevant provisions of this Annexure as may be agreed upon as appropriate and desirable, taking equitably into consideration the consequences of such modifications on the cultivators concerned both in India and in Pakistan. Any modifications agreed upon shall lapse on the terminal date specified in Column (2) below.

Column (1)	*Column (2)*
(*a*) M. R. Link	Up to 31st March 1962
(*b*) B. S. Link	Up to 31st March 1962
(*c*) B. R. B. D. Link	Up to 31st March 1962
(*d*) Trimmu-Islam Link (including the Head-works for this Link on the Ravi Main and the Sutlej Main).	Two years beginning from the date on which the Link is ready to operate, but not to extend beyond 31st March 1968.
(*e*) Rasul-Qadirabad and Qadirabad-Balloki Links (including the Head-works for these Links).	Three years beginning from the date on which the Links are ready to operate, but not to extend beyond the end of the Transition Period.

66. If, at any time before the end of the Transition Period, the Bank is of the opinion that the part of the system of works referred to in Article IV (1) is ready to provide additional supplies during September 11-30 and *rabi*, over and above the replacements in these periods specifically provided for in Parts 2 to 5 of this Annexure, it shall so notify the Parties. On receipt of such notification, Pakistan shall provide, towards a reduction of the deliveries by India during September 11-30 and *rabi* to the C.B.D.C. and at Ferozepore under the provisions of Parts 2 to 5 of this Annexure, the equivalent (at points of delivery) of 60 per cent of the total supplies made available by the whole of the above-mentioned system of works : Provided that, in computing the aforesaid total supplies, any contribution from the Indus and any supplies developed by tube-wells shall be excluded.

67. The provisions of this Annexure may be amended by agreement between the Commissioners. Any such amendment shall become effective when agreement thereto has been signified in an exchange of letters between the two Governments.

PART 10—SPECIAL PROVISIONS FOR 1960 AND 1961

68. The actual withdrawals made by India and the actual deliveries made by India into the C.B.D.C., into the Dipalpur Canal and into the Sutlej Main at Ferozepore, during the period between the Effective Date and the date on which this Treaty enters into force, shall be deemed to be withdrawals and deliveries made in accordance with the provisions of this Annexure.

69. For the year commencing on 1st April 1960, (*a*) the communication by India of the amount of the estimated proportionate working expenses specified in Paragraphs 48 (*a*) and 49 (*a*) shall be made within one month of the date on which this Treaty enters into force and (*b*) the payment by Pakistan to India specified in Paragraphs 48 (*b*) and 49 (*b*) with respect to that year shall be made by Pakistan within three months of the date on which this Treaty enters into force and the provisions of Paragraph 50 shall then apply.

70. Subject to the provisions of Paragraph 28 and if the supplies due to be released for Pakistan at Ferozepore, during 1961 from April 1-10 to June 21-30, are less than the amounts set out in Column (2) below and Pakistan is unable to deliver into the Dipalpur Canal from the B.R.B.D. Link during April, May or June amounts equal to the aggregate amounts specified for that month in Column (2) below, India will make additional deliveries into the Dipalpur Canal at Ferozepore to make up these aggregate amounts in such manner as to ensure that the canal is not closed for more than 10 days either in May or in June 1961.

Column (1)		*Column (2)*
April	1-10	Nil cusecs
	11-15	Nil "
	16-20	1,000 "
	21-30	800 "
Aggregate for April		13,000 cusec-days

Column (1)		*Column (2)*
May	1-10	Nil cusecs
	11-20	1,000 "
	21-31	800 "
Aggregate for May		18,800 cusec-days
June	1-10	1,000 cusecs
	11-20	1,000 "
	21-30	1,200 "
Aggregate for June		32,000 cusec-days

APPENDIX I TO ANNEXURE H

PROVISIONS FOR TIME-LAG AND FOR DETERMINATION OF THE 'SUTLEJ COMPONENT AT FEROZEPORE' AND THE 'BEAS COMPONENT AT FEROZEPORE'

A. *Time-lag*

	Time-lag in days	
	April (*Ferozepore Dates*)	*May 1 to July 10* (*Ferozepore Dates*)
Bhakra/Nangal to Rupar	1	1
Rupar to Ferozepore	4	3
Ferozepore to Suleimanke	3	2
Shahnehr Canal head to Mandi Plain	3	2
Mandi Plain to Ferozepore	1	1
Western Bein to Ferozepore	1	1
Madhopur to Mandi Plain via Beas	3	2
Mirthal to Mandi Plain	3	2

For other periods and reaches, unless otherwise specified in this Annexure, the dates will be taken to be the same as the dates at Ferozepore, with no allowance for time-lag.

B. *'Sutlej Component at Ferozepore' corresponding to assumed releases of flow waters below Rupar*

(i) The assumed releases of flow waters below Rupar shall be taken as equal to the Sutlej flow waters, as distinct from stored waters, which would have been released below Rupar if the aggregate of the net Indian withdrawals from these flow waters had been limited to the values specified in Paragraph 21 (*a*) of this Annexure.

(ii) For each of the Water-accounting Periods from April 1-10 to August 21-31 (Ferozepore dates) the values of the 'Sutlej Component at Ferozepore' corresponding to the assumed releases below Rupar shall be worked out from the following table :

Assumed releases below Rupar (Cusecs)	*'Sutlej Component at Ferozepore'* (Cusecs)
below 500	Actual at Ferozepore
500	320
1,000	640
1,500	960
2,000	1,280
3,000	1,920
5,000	3,200
7,500	5,400
10,000	7,600
15,000	12,000
20,000	16,400
30,000	25,200
40,000	34,000
50,000	42,800
100,000	86,800
200,000	174,800

For intermediate values of the assumed releases below Rupar, in excess of 500 cusecs, the 'Sutlej Component at Ferozepore' will be worked out proportionately.

(iii) During September 1-10 to 21-30, the 'Sutlej Component at Ferozepore' shall be taken as equal to 0.90 S *plus* 400 cusecs, where S equals the assumed releases of flow water below Rupar (allowing three days time-lag between Ferozepore and Rupar).

C. *'Beas Component at Ferozepore' (X) corresponding to the sum (Y) of the Beas Component at Mandi Plain and the discharge of the Western Bein*

For each Water-accounting Period, the 'Beas Component at Ferozepore' (X) shall be worked out by multiplying the sum (Y) of the Beas Component at Mandi Plain and the discharge of the Western Bein by the appropriate factor given in the following table :

Water-accounting Periods (Ferozepore Dates)	*Factor for converting Y to X*
April 1-10 and 11-20	0.95
April 21-30 and May 1-10	0.89
May 11-20 to July 1-10	0.87
July 11-20 to August 11-20	0.89
August 21-31 and September 1-10	0.92
September 11-20 to October 21-31	0.98
November 1-10 to 21-30	0.95
December 1-10 to 21-31	0.97
January 1-10 to February 21-28/29	0.92
March 1-10 to 21-31	0.94

APPENDIX II TO ANNEXURE H

FORMS OF WATER-ACCOUNT

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FORM NO. 1 (*a*)

WATER-ACCOUNT AS AT FEROZEPORE FOR THE PERIODS APRIL 1-10 TO SEPTEMBER 21-30

Water-accounting Period (*Ferozepore Dates*) ..... *19....*

Item	*Particulars*	*Dates (with time-lag, if any)*	*Average value (cusecs)*
	Part A		
1.	Sutlej Component at Ferozepore = Item (15) or (26) of Form 5, as the case may be.		
2.	Beas Component at Ferozepore = Item (20) of Form 2.		
3.	Withdrawal due to India as at Ferozepore, under Paragraph 21 (*b*) = [(1) + 16% of (2)] limited to .....* cusecs.		
	Part B		
4.	'Gross amount', as at Ferozepore = Item (10) or (14) of Form 4.		
5.	Additional withdrawal due to India, as at Ferozepore, under Paragraph 22 = (4) × ..†		
6.	Withdrawals due to India, as at Ferozepore, under Paragraphs 21(*b*) and 22 = (3) + (5).		

* 3,500 cusecs during April 1–10 to 21–30
4,500 cusecs during May 1–10 to 21–31
5,500 cusecs during June 1–10 to Sept. 21–30.

† 0.60 for Apr. 1–10 to May 1–10
0.65 for May 11–20
0.70 for May 21–31 to Sept. 21–30.

Item	*Particulars*	*Dates (with time-lag, if any)*	*Average value (cusecs)*
	Part C		
	To be worked out for Sept. 11-20 and 21-30 only		
7.	River gains from Ferozepore to Islam = Item (7) of Form 6.		
8.	Deductions under Paragraph 23 (3,400 cusecs for Sept. 11-20 ; 2,900 cusecs for Sept. 21-30).		
9.	Adjusted withdrawal due to India, as at Ferozepore, under Paragraph 23 = (6) + (7) — (8).		
	Part D		
10.	Aggregate of Sutlej and Beas Components at Ferozepore = (1) + (2).		
11.	Excess of (10) over (6) or (9), as the case may be = (10) — (6) for Apr. 1-10 to Sept. 1-10 and (10) — (9) for Sept. 11-20 and 21-30.		
12.	Aggregate of (4) and (11).		
13.	Further withdrawal due to India as at Ferozepore under Paragraph 24 = (12) — 35,000 cusecs, if positive, during Apr. 1-10 to Aug. 21-31 or (12) — 30,000 cusecs, if positive, during Sept. 1-10 to 21-30.		
14.	Delivery due to Pakistan at Ferozepore under Paragraph 25 = (11) — (13).		
	Part E		
15.	Additional withdrawals due to India at Ferozepore as per information given by Pakistan under Paragraph 27 (to be taken as zero if (18) below is positive).		
16.	Deliveries due to Pakistan at Ferozepore under Paragraphs 25 and 27 = (14) — (15).		
	Part F		
17.	Withdrawal due to India, as at Ferozepore, under Paragraphs 21(*b*), 22, 23 and 24 = (6) + (13) for Apr. 1-10 to Sept. 1-10 and (9) + (13) for Sept 11-20 and 21-30.		
18.	Excess of withdrawals due to India, as at Ferozepore, over available supply = [(17) — (10)] if positive.		
19.	50 % of (18).		
20.	Brought forward from preceding Period = (25) of preceding Period multiplied by number of days in preceding Period divided by number of days in the current Period (zero for Apr. 1-10).		
21.	Adjusted delivery due to Pakistan at Ferozepore = (16) — (19) — (20).		

Item	*Particulars*	*Dates (with time-lag, if any)*	*Average value (cusecs)*
	Part G		
22.	River supply at Ferozepore Below (actual).		
23.	Delivery into Dipalpur Canal at Ferozepore (actual).		
24.	Total actual delivery to Pakistan at Ferozepore = (22) + (23).		
25.	Excess (+) or deficit (—) in deliveries to Pakistan at Ferozepore carried over** to succeeding Period = (24) — (21).		

** The carry-over will be subject to the following :
1. If Item (13) of Form 3 is zero or positive, then no excess shall be carried over to the succeeding Period, but any deficit shall be so carried over.
2. Neither excess nor deficit shall be carried over to the succeeding Period in case
(i) Item (24) of this Form *plus* Item (4) of this Form exceeds 35,000 cusecs during Apr. 1–10 to Aug. 21–31 or 30,000 cusecs during Sept. 1–10 ; or

(ii) Item (24) of this Form *plus* Item (4) of this Form *plus* Item (7) of Form 6, or *minus* Item (8) of Form 6, as the case may be, exceeds 30,000 cusecs during Sept. 11–20 or 21–30.

FORM NO. 1(*b*)

WATER-ACCOUNT AS AT FEROZEPORE FOR THE PERIODS OCTOBER 1-10 TO FEBRUARY 21-28/29

Water-accounting Period (Ferozepore Dates)..... 19.....

Item	*Particulars*	*Average value (cusecs)*
1.	Beas Component at Ferozepore = Item (20) of Form 2.	
2.	...* per cent of Beas Component = ... * × (1)/100. (*Items 3 and 4 are to be worked out for October 1-10 to November 1-10 only.*)	
3.	Additional fixed supply to be delivered to Pakistan under Paragraph 34.	
4.	River gains from Ferozepore to Islam = Item (7) of Form 6, or gains estimated in accordance with Paragraph 62.	
5.	Supply to be delivered to Pakistan under Paragraph 34 = (2) + (3) — (4).	
6.	Aggregate of (4) and (5).	
7.	Excess of (6) over 25,000 cusecs during October 1-10 or 11-15, or 10,000 cusecs during October 16-20 to February 21-28/29.	
8.	Delivery due to Pakistan under Paragraphs 34 and 36 = (5) — (7).	

* 84 per cent during October 1–10 and 11–15 and 79 per cent during October 16–20 to February 21–28/29.

Item	*Particulars*	*Average value (cusecs)*
9.	Brought over from preceding Period = (14)† of preceding Period multiplied by the number of days in preceding Period divived by number of days in the current Period.	
10.	Total delivery due to Pakistan = (8) — (9).	
11.	Ferozepore Below (actual).	
12.	Dipalpur Canal at Head.	
13.	Total actual delivery to Pakistan = (11) + (12).	
14.	Excess (+) or deficit (—) in deliveries to Pakistan to be carried over** to the succeeding Period = (13) — (10).	

† For October 1–10, this will be Item 25 of Form 1 (*a*) for September 21–30.

** The carry-over will be subject to the following :
1. If Item (13) of Form 3 is zero or positive, then no excess shall be carried over to the succeeding Period but any deficit shall be so carried over.
2. In case Item (13) of this Form *plus* Item (4) of this Form or *minus* Item (8) of Form 6, as the case may be, exceeds 25,000 cusecs during October 1–10 or 11–15 or 10,000 cusecs during October 16–20 to March 21–31, then neither excess nor deficit shall be carried over to the succeeding Period.

FORM NO. 1 (*c*)

WATER-ACCOUNT AS AT FEROZEPORE FOR THE PERIODS MARCH 1-10 TO MARCH 21-31

Water-accounting Period (Ferozepore Dates) ..... 19.....

Item	*Particulars*	*Average value (cusecs)*
1.	Beas Component at Ferozepore = Item (20) of Form 2.	
2.	Delivery to be made to Pakistan at Ferozepore under Paragraph 34 (*e*) = 79 per cent of (1).	
3.	River supply at Trimmu Above.	
4.	River supply at Trimmu Below.	
5.	River supply at Panjnad Below (with 5 days time-lag from Trimmu, the Trimmu dates being the same as Ferozepore dates).	
6.	Supply required at Trimmu to meet the actual withdrawals of Panjnad Canals = (4) — (5), limited to a minimum of zero.	
7.	Actual withdrawals of Haveli Canals at Head.	
8.	Supply required at Trimmu to meet the needs of Haveli and Panjnad Canals = (6) + (7).	
9.	Lesser of (8) and 7,500 cusecs. [*Items (10) and (11) are to be taken as zero if (3) does not exceed (9).*]	
10.	'Gross amount', as at Ferozepore = Item (10) of Form 4.	

Item	*Particulars*	*Average value (cusecs)*
11.	Reduction to be made in (2), in accordance with Paragraph 35 = 60 per cent of (10).	
12.	Delivery due to Pakistan under Paragraphs 34 (*e*) and 35 = (2) — (11).	
13.	Aggregate of (11) and (12).	
14.	Excess of (13) over 10,000 cusecs.	
15.	Delivery due to Pakistan under Paragraphs 34 (*e*), 35 and 36 = (12) — (14).	
16.	Brought over from preceding Period = Item (19)* of preceding Period multiplied by number of days in the preceding Period divided by number of days in the current Period.	
17.	Total delivery due to Pakistan = (15) — (16).	
18.	Actual delivery (i.e., River supply at Ferozepore Below).	
19.	Excess (+) or deficit (—) in deliveries to Pakistan to be carried over† to the succeeding Period = (18) — (17). [*There shall be no carry-over from March 21-31 to the succeeding April 1-10.*]	

* For March 1–10, this will be Item (14) of Form 1 (*b*) for February 21–28/29.

† The carry-over will be subject to the following :
1. If Item (13) of Form 3 is zero or positive, then no excess shall be carried over to the succeeding Period, but any deficit shall be so carried over.
2. In case Item (10) of this Form *plus* Item (18) of this Form exceeds 10,000 cusecs during March 1–10 or March 11–20, then neither nor deficit shall be carried over to the succeeding Period.

FORM NO. 2

ESTIMATION OF THE BEAS COMPONENT AT FEROZEPORE
(PARAGRAPH 5 (*d*))

Water-accounting Period (Ferozepore Dates) ..... *19* .....

Item	*Particulars*	*Dates at site (with due allowance for time-lag)*	*Average value (cusecs)*
1.	M. B. Link at head.		
2.	U.B.D.C. escapages into The Beas.		
3.	Ravi water transferred to The Beas* = [0.94 × (1) + (2).		

* A conveyance loss of 6% from the head of the Madhopur-Beas Link to the outfall of the Chakki Torrent into the Beas Main will be used until revised in accordance with the provisions of Paragraph 45 (*c*).

Item	*Particulars*	*Dates at site (with due allowance for time-lag)*	*Average value (cusecs)*
4.	Chakki torrent above junction with Beas Main. [N.B. : This includes (3)]		
5.	Beas at Mirthal (upstream of the junction with Chakki).		
6.	Aggregate of (4) and (5).		
7.	River supply at Mandi Plain.		
8.	Ravi Component at Mandi Plain = (3) or [(3) × (7) ÷ (6)] whichever is smaller.		
9.	M. B. Link run-out allowance = Item (7) of Form 9.		
10.	Beas Component at Mandi Plain = (7) — (8) — (9).		
11.	Withdrawals by Shahnehr Canal.		
12.	Excess, if any, of Shahnehr Canal over 940 cusecs.		
13.	Withdrawals from The Beas by new canals constructed after the Effective Date, each with a capacity of more than 10 cusecs.		
14.	Equivalent of (13) at Mandi Plain.†		
15.	Abstraction (+) of flow waters by, or release (—) of stored waters from, reservoirs on The Beas.		
16.	Equivalent of (15) at Mandi Plain.†		
17.	Corrected Beas Component at Mandi Plain = (10) + (12) + (14) + (16).		
18.	Inflow from Western Bein.		
19.	Aggregate of (17) and (18).		
20.	Beas Component at Ferozepore = (19) multiplied by the appropriate factor for the period given in Paragraph C of Appendix I to this Annexure.		

† As determined in accordance with the provisions of Paragraph 45 (*d*).

FORM NO. 3

INDIAN CANAL INDENTS AND WITHDRAWALS AT HARIKE AND FEROZEPORE

(PARAGRAPH 46 (*b*))

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	*Particulars*	*Dates at site (with due allowance for time-lag)*	*Average value (cusecs)*
1.	Withdrawal by Makhu Canal at Harike.		
2.	Withdrawal by Ferozepore Feeder at Harike.		
3.	Withdrawal by Rajasthan Feeder at Harike.		

Item	*Particulars*	*Dates at site (with due allowance for time-lag)*	*Average value (cusecs)*
4.	Withdrawal by Bikaner Canal at Ferozepore.		
5.	Withdrawal by Eastern Canal at Ferozepore.		
6.	Total withdrawals = (1) + (2) + (3) + (4) + (5).		
7.	Indent of Makhu Canal at Harike.		
8.	Indent of Ferozepore Feeder at Harike.		
9.	Indent of Rajasthan Feeder at Harike.		
10.	Indent of Bikaner Canal at Ferozepore.		
11.	Indent of Eastern Canal at Ferozepore.		
12.	Total Indents = (7) + (8) + (9) + (10) + (11).		
13.	(6) — (12).		

FORM NO. 4

DETERMINATION OF THE 'GROSS AMOUNT' AS AT FEROZEPORE
(MARCH 1-10 TO SEPTEMBER 21-30 ONLY)

(PARAGRAPHS 22 AND 35)

*Water-accounting Period** (*Ferozepore Dates*) ..... *19*.....

Item	*Particulars*	*Average value (cusecs)*
1.	Chenab at Merala Above (average of daily values, in accordance with Paragraphs 22(*a*) or 35).	
2.	Ravi Component at Balloki (for March 1-10 to 21-31 only) = Item (5) of Form 7.	
3.	Aggregate of (1) and (2).	
4.	Appropriate 'Floor Discharge' = Column (2) of Table B† or Column (2) of Table C, as the case may be.	
5.	Appropriate 'Ceiling Discharge' = Column (3) of Table B† or Column (3) of Table C, as the case may be.	
6.	Difference, Ceiling *minus* Floor = (5) — (4).	
7.	Appropriate 'Gross amount' as at Ferozepore corresponding to (5) = Column (4) of Table B† or Column (4) of Table C, as the case may be.	
8.	Ratio of (7) to (6) = (7) ÷ (6) (worked out to 3 decimals).	
9.	Supplies available in excess of Floor Discharge = [(3) — (4)], limited to a maximum of (6) and a minimum of zero.	
10.	'Gross amount', as at Ferozepore, corresponding to (3) = (9) × (8).	

* In case of a closure at Merala under the circumstances mentioned in Paragraph 22 (*b*) (iii), Items (1) to (10) shall be worked out for the non-closure days only.
† Subject to the provisos (i) and (ii) of Paragraph 22 (*b*).

Item	*Particulars*	*Average value (cusecs)*
	[Items (11) to (14) to be worked out only if there has been a closure at Merala under the circumstances of Paragraph 22 (b) (*iii*).	
11.	Total amount, as at Ferozepore, for the closure days = Item (9) of Form 8. . .	cusec-days
12.	Total amount, as at Ferozepore, for the remaining days = Item (10) multiplied by number of non-closure days	cusec-days
13.	Aggregate of (11) and (12)	cusec-days
14.	'Gross amount', as at Ferozepore, for the Water-accounting Period as a whole = (13) divided by number of days in the Period	cusecs

FORM NO. 5

ESTIMATION OF THE SUTLEJ COMPONENT AT FEROZEPORE
(APRIL 1-10 TO SEPTEMBER 21-30 ONLY)

(PARAGRAPH 5 (*e*))

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	*Particulars*	*Dates at site (with due allowance for time-lag)*	*Average value (cusecs)*
1.	Withdrawal by Bhakra Main Line at Rupar.		
2.	Withdrawal by Sirhind Canal at Rupar.		
3.	Withdrawal by Bist Doab Canal at Rupar.		
4.	Aggregate of (1), (2) and (3).		
5.	Abstraction of flow waters by Bhakra Reservoir.		
6.	Abstraction of flow waters by the Nangal Pond.		
7.	Release of stored waters from Bhakra Reservoir.		
8.	Release of stored waters from the Nangal Pond.		
9.	Net abstraction of flow waters by Bhakra Reservoir and Nangal Pond = [(5) + (6) — (7) — (8)], limited to a minimum of zero.		
10.	Net release of stored waters from Bhakra Reservoir and Nangal Pond = [(7) + (8) — (5) — (6)], limited to a minimum of zero.		
11.	River supply at Rupar Below (actual).		
12.	Flow water, as at Rupar Above = (11) + (4) + (9) — (10).		
13.	Withdrawal from flow water due to India under Paragraph 21 (*a*) = (12), limited to 10,250 cusecs during April 1-10 to July 1-10; 12,000 cusecs during July 11-20 to August 21-31 and 10,500 cusecs during September 1-10 to 21-30.		
14.	Sutlej at Rupar Below, if India's withdrawals from flow waters had been limited to (13) = (12) — (13).		

Item	Particulars	Dates at site (with due allowance for time-lag)	Average value (cusecs)
	[*Item (15) is to be worked out for:*		
	(*i*) *Apr. 1-10 to Aug. 21-31, only if (14) equals or exceeds 500 cusecs, and*		
	(*ii*) *Sept. 1-10 to Sept. 21-30, irrespective of the value of (14).*]		
15.	Sutlej Component at Ferozepore corresponding to (14) as determined from Paragraph B (ii) or Paragraph B (iii) of Appendix I to this Annexure.		
	[*Items (16) to (26) are to be worked out only for Apr. 1-10 to Aug. 21-31 and then also only if (14) is less than 500 cusecs.*]		
16.	Actual Sutlej flow at Usafpur (including inflow from Eastern Bein).		
17.	River supply at Mandi Plain (actual) *plus* inflow from Western Bein = Item (7) of Form 2 + Item (18) of Form 2.		
18.	Aggregate of (16) and (17).		
19.	Withdrawal by Makhu Canal at Harike.		
20.	Withdrawal by Ferozepore Feeder at Harike.		
21.	Withdrawal by Rajasthan Feeder at Harike.		
22.	Abstraction (+) from flow waters by, or release (—) of stored waters from, the Harike Pond.		
23.	Total withdrawal at Harike = (19) + (20) + (21) + (22).		
24.	River supply at Ferozepore Above (actual).		
25.	Sutlej Component at Ferozepore (actual, corrected for withdrawals at Harike) = [(16) ÷ (18)] × [(24) + 0.90 (23)].		
26.	Sutlej Component at Ferozepore for the purposes of Paragraph 21 (*b*) = (25), if (11) is equal to or less than (14); and (25) × (14) ÷ (11), if (11) is more than 500 cusecs.		

FORM NO. 6

ESTIMATION OF THE RIVER GAINS AND LOSSES FROM FEROZEPORE TO ISLAM
(SEPTEMBER 11-20 TO NOVEMBER 1-10 ONLY)

(PARAGRAPHS 23 AND 34)

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	Particulars	Average value (cusecs)
1.	River at Ferozepore Below.	
2.	B. S. Link at tail.	
3.	Total withdrawals by canals at Suleimanke.	
4.	Trimmu-Islam Link delivery into Sutlej Main.	
5.	Total withdrawals by canals at Islam.	
6.	River at Islam Below.	

Item	*Particulars*	*Average value (cusecs)*
7.	River gains from Ferozepore to Islam = [(3) + (5) + (6) — (1) — (2) — (4)] if positive.	
8.	River losses from Ferozepore to Islam = [(1) + (2) + (4) — (3) — (5) — (6)] if positive.	

FORM NO. 7

ESTIMATION OF THE RAVI COMPONENT AT BALLOKI ABOVE
(MARCH 1-10 TO 21-31 ONLY)

(PARAGRAPH 35)

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	*Particulars*	*Average value (cusecs)*
1.	Delivery at tail of M. R. Link.	
2.	Delivery into Ravi from B.R.B.D. escapes.	
3.	Delivery at tail of U.C.C.	
4.	Total river supply at Balloki Above.	
5.	Ravi component at Balloki = [(4) — (1) — (2) — (3)] limited to a minimum of zero.	

FORM NO. 8

DETERMINATION OF THE 'GROSS AMOUNT' AS AT FEROZEPORE
DURING DAYS OF CLOSURE AT MERALA (APRIL 1-10 TO SEPTEMBER 21-30 ONLY)

(PARAGRAPH 22 (b) (iii))

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	*Particulars*	*Daily discharges (cusecs)*			
	Dates at Merala (Same as Ferozepore dates)				
1.	Jammu Tawi Discharge near Merala.				
2.	Chenab flow at Merala Above.				
3.	M. R. Link at head.				
4.	U.C.C. at head.				
	Dates at Balloki (allowing 3 days time-lag from Merala to Balloki)				
5.	Supplies at Balloki Above.				
6.	Share of B. S. Link = 0.67 × (5).				
7.	Q = Item (6) — 300 cusecs, limited to A*.				
8.	Daily 'gross amount' at Ferozepore = N × (7) where N = 1.08 during April 1-10 to August 21-31 and 1.00 during September 1-10 to 21-30.				
9.	Sum of daily 'gross amounts' for the closure days = sum of daily figures for (8). . . . . cusec-days.				

* A equals : 8,000 cusecs, April 1–10 ;
11,000 cusecs, April 11–20 ;
13,000 cusecs, April 21–30 and
15,000 cusecs, May 1–10 to Sept. 21–30.

FORM NO. 9

M. B. LINK RUN-OUT (NIKAL) ALLOWANCE
(SEPTEMBER 1 TO OCTOBER 15 ONLY)

(PARAGRAPH 45 (*e*))

Water-accounting Period (Ferozepore Dates) ..... *19*.....

Item	*Particulars*	*Value*
1.	Date* of the last day of operation of the M. B. Link.	
2.	M. B. Link at Head	
	(*a*) for the last day of operation	cusecs
	(*b*) for the day preceding (*a*)	cusecs
3.	Total of (2) (*a*) and (2) (*b*)	cusec-days
4.	U.B.D.C. escapages into The Beas	
	(*a*) for the last day of operation of the M. B. Link	cusecs
	(*b*) for the day preceding (*a*)	cusecs
5.	Total of (4) (*a*) and (4) (*b*)	cusec-days
6.	Run-out (*nikal*) = [0.94 × (3)] *plus* (5).	cusec-days
7.	Average run-out allowance on account of M. B. Link = (6) divided by 10 . .	cusecs

* If the Link has run continuously since 30th August, then this date will be the date preceding that on which the Link closes for the first time after 31st August. If the Link has not been in continuous operation since 30th August, there shall be no run-out allowance.

APPENDIX III TO ANNEXURE H

CALCULATIONS FOR DETERMINING PROPORTIONATE WORKING EXPENSES TO BE PAID BY PAKISTAN UNDER THE PROVISIONS OF PARAGRAPHS 48 AND 50 OF THIS ANNEXURE

1. Until Pakistan exercises the option under the provisions of Paragraph 20 of this Annexure, the proportionate working expenses payable by it under the provisions of Paragraphs 48 and 50 of this Annexure shall be (X per cent of A) *plus* B, where

(*a*) For the year commencing on 1st April 1960, X equals 100; and from the year commencing 1st April 1961, $X = \frac{202}{365} \times 100$;

(*b*) A is the aggregate sum of the following:

(i) 45 per cent of the 'working expenses' during the year on Madhopur Headworks;

(ii) 65.5 per cent of the 'working expenses' during the year on 'II Main Canals and Branches' (carrier channels only); and

(iii) 66.8 per cent of the 'working expenses' during the year on 'III Distributaries' (carrier channels only); and

(*c*) B is a fixed over-head charge equal to Pounds Sterling 60,000 per year.

2. The 'working expenses' for the purpose of paragraph 1 above shall consist of:

i) Expenditure under account heads Maintenance and Repairs, Extensions and Improvements, and Tools and Plant, and

(ii) Pro-rata establishment charges on account of Divisional and Circle Offices and Chief Engineers' Direction Charges.

3. The proportionate working expenses payable by Pakistan shall be modified, in accordance with paragraph 4 below, if

(*a*) India should bring into operation any new channel to irrigate any part of the areas which were irrigated, before the Effective Date, from the Lahore Branch and the Main Branch Lower ; or

(*b*) Pakistan should desire to reduce
(i) the period specified in Paragraph 7 of this Annexure ; or
(ii) the maximum quantities (in cusecs) specified in Paragraph 7 of this Annexure ; or

(*c*) any change is made in the period or quantity of deliveries to the C.B.D.C. in accordance with the provisions of Paragraphs 10 or 11 of this Annexure.

In case of (*b*) above, Pakistan shall give India due notice of its intentions, such notice to reach India at least six months before the date from which the change is sought.

4. (*a*) Under the conditions envisaged in paragraph 3 (*a*) above, Pakistan shall pay 100 per cent of the 'working expenses' on such Branches or Distributaries as carry supplies for Pakistan only and for the remaining carrier channels the percentages given in paragraph 1 (*b*) (*ii*) or 1(*b*) (iii) above shall be re-calculated on the basis of ratio of cusec-miles to be delivered by the remaining channels to Pakistan (with pro-rata addition on account of absorption losses) to the aggregate of cusec-miles of the remaining channels (on the basis of 1948 capacities), the cusec-miles for each such channel being worked out separately.

(*b*) If there is a reduction in the period specified in Paragraph 7 of this Annexure, as envisaged under paragraph 3 (*b*) (i) or 3 (*c*) above, the factor X in paragraph 1 (*a*) above will be taken as equal to

$$\frac{\text{number of days during which C.B.D.C. is due to receive supplies from U.B.D.C.}}{\text{number of days in the year}}$$

(*c*) In the event that there is a reduction in the maximum quantities specified in Paragraph 7 of this Annexure as mentioned in paragraphs 3 (*b*) (ii) or 3 (*c*) above, the percentages in paragraphs 1 (*b*) (i), (*b*) (ii) and (*b*) (iii) above will be reduced pro-rata.

APPENDIX IV TO ANNEXURE H

CALCULATIONS FOR DETERMINING PROPORTIONATE WORKING EXPENSES TO BE PAID BY PAKISTAN UNDER THE PROVISIONS OF PARAGRAPHS 49 AND 50 OF THIS ANNEXURE

1. Until Pakistan exercises the option under the provisions of Paragraph 64 of this Annexure, the proportionate working expenses payable by it under the provisions of Paragraphs 49 and 50 of this Annexure shall be X per cent of (A *plus* B) where :

(*a*) For each of the three years commencing on 1st April 1960, 1st April 1961 and 1st April 1962, X equals 51 ; and from the year commencing 1st April 1963, X equals 80 ;

(*b*) A is the aggregate sum of the 'working expenses' during the year ; and

(*c*) B is a fixed overhead charge equal to Pounds Sterling 110,000.

2. The 'working expenses' for the purpose of paragraph 1 above shall consist of :

(i) expenditure on the Ferozepore Headworks (including the part of the Dipalpur Canal in India) under account heads Maintenance and Repairs, Extensions and Improvements, and Tools and Plant ;

(ii) pro-rata establishment charges on account of the Divisional and Circle Offices and Chief Engineers' Direction Charges ; and

(iii) expenditure on 'Minor Works 18A (2) Miscellaneous' (discharge observations at Ferozepore).

PROTOCOL TO THE INDUS WATERS TREATY 1960.[1] SIGNED ON 27 NOVEMBER, 2 AND 23 DECEMBER 1960

The Government of India, the Government of Pakistan and the International Bank for Reconstruction and Development, having found that certain textual errors have occurred in The Indus Waters Treaty 1960,[1] as signed by their duly authorised Plenipotentiaries at Karachi on the nineteenth day of September in the year one thousand nine hundred and sixty, hereby agree as follows :

The corrections specified in the schedule hereunder shall be carried out in the text of The Indus Waters Treaty 1960 and the said Treaty shall be read subject to the said corrections.

THE SCHEDULE

Serial No.	*Reference*	*Page*	*Paragraph*	*Line*	*Particulars*
1	Annexure C	4	6(*b*)	5	For colon read semicolon.
2	Annexure D	3	6(*a*)	5-6	For "communiate" read "communicate".
3	Annexure E	12	2(*b*)	5	For "case" read "cases".
4	Annexure F	3	1(22)	2	For "Annxure" read "Annexure".
5	Annexure H	1	title	2	For "Article II (5)" read "(Article II (5))".
6	Do.	3	title above paragraph	6	For "the Ravi" read "The Ravi".
7	Do.	3	Table A Column Numbers.		For "(Col. 2)" read "Col. (2)".
8	Annexure H	15	27(*ii*)	1	For "'gross amount,' " read "'gross amount',".
9	Do.	20	35(*i*)	1	For "above" read "Above".
10	Do.	23		1	For "42-46" read "42 to 46".
11	Do.	24	45(*e*)	3	For "the Beas" read "The Beas".
12	Do.	25	46	7	For "Water-accountng" read "Water-accounting".
13	Do.	26	46(*d*)	7	For "Water-account" read "water-account".
14	Appendix I to Annexure H	1	title	2	For "Time-Lag" read "Time-lag".
15	Appendix II to Annexure H	4	Item 2	1	For "Compoment" read "Component".

[1] See p. 126 of this volume.

Serial No.	*Reference*	*Page*	*Paragraph*	*Line*	*Particulars*
16	Appendix II to Annexure H	6	Item 5	1	For "below" read "Below".
17	Do.	11	Footnote	1	For "circumsances" read "circumstances".
18	Do.	14	Item 15	3	For "C (*ii*)" and "C (*iii*)" read "B (*ii*)" and "B (*iii*)" respectively.
19	Do.	19	Footnote	2	For "link" read "Link".
20	Do.	19	Do.	3	For "link" read "Link".
21	Appendix III to Annexure H	2	3(*c*)	3	For "and" read "or".
22	Do.	3	4(*b*)	3	For 'and' read 'or'.
23	Do.	3	4(*c*)	3	For "3 (*b*) (*ii*) and (*c*)" read "3 (*b*) (*ii*) or 3 (*c*)".
24	Appendix IV to Annexure H	1	2(*iii*)	1	For "Miscellaneous," read "Miscellaneous'".

IN WITNESS WHEREOF the respective Plenipotentiaries of the Parties hereto, being signatories to The Indus Waters Treaty 1960, have affixed their signatures to this Protocol, which shall be called the "Protocol to The Indus Waters Treaty 1960", on the day appearing below their respective signatures.

DONE in triplicate in English.

For the Government of India :

(*Signed*) Jawaharlal NEHRU
27th November, 1960

For the Government of Pakistan :

(*Signed*) Mohammad Ayub KHAN
Field Marshal, H.P., H.J.
2nd December, 1960

For the International Bank for Reconstruction and Development :

(*Signed*) W. A. B. ILIFF
23rd December, 1960